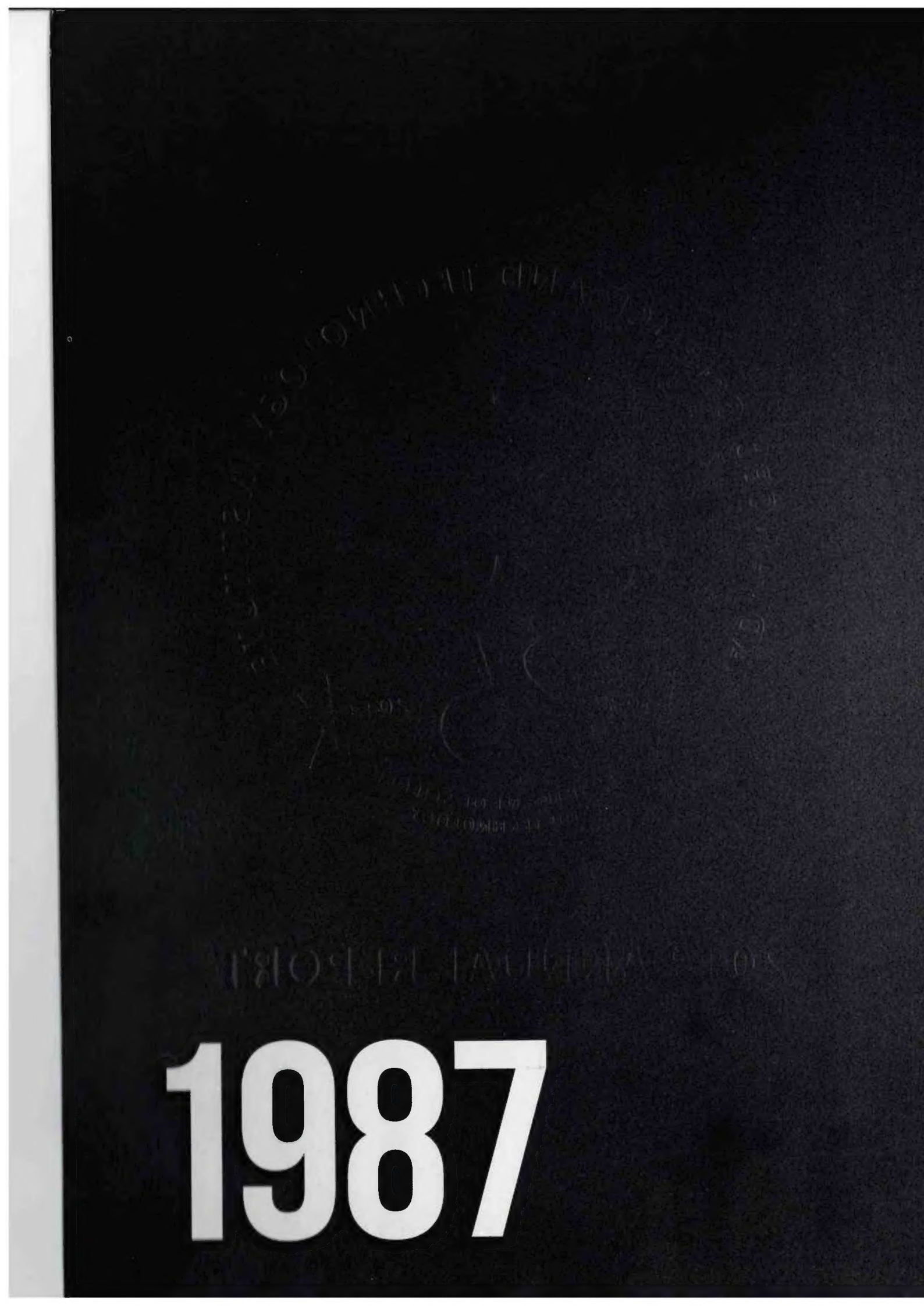
Republic of the Philippines
Department of Science and Technology
ADVANCED SCIENCE AND TECHNOLOGY INSTITUTE

ASTI Bldg., U.P. Technology Park, Pi Garcia Avenue, Diliman, Quezon City, Philippines 1101
www.asti.dost.gov.ph

2012 ANNUAL REPORT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2012

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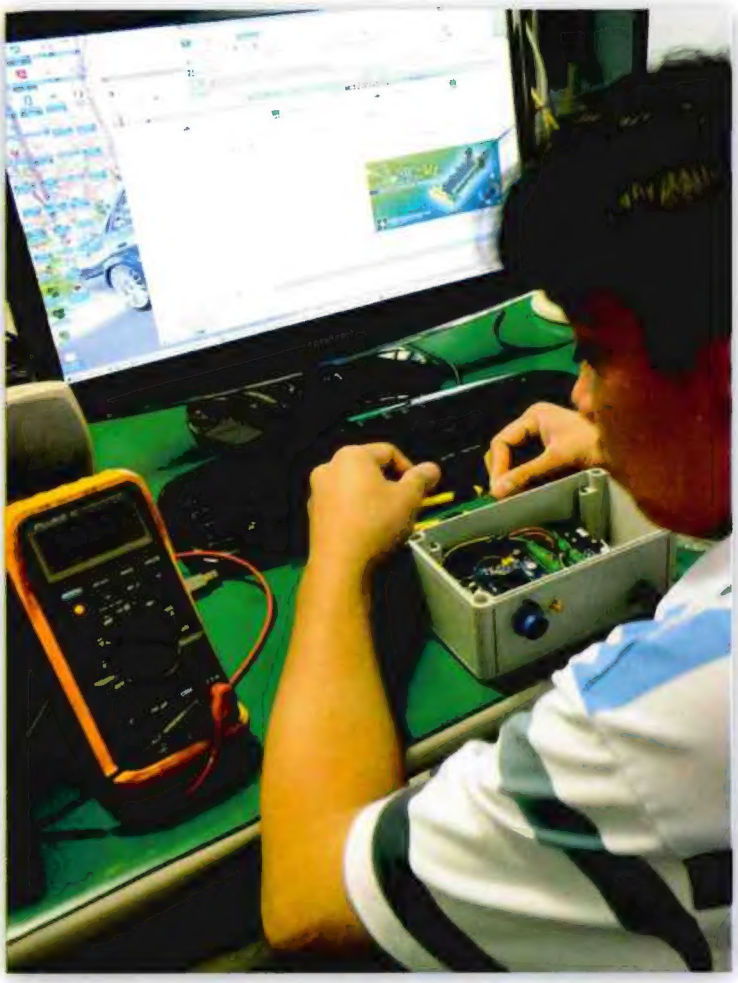
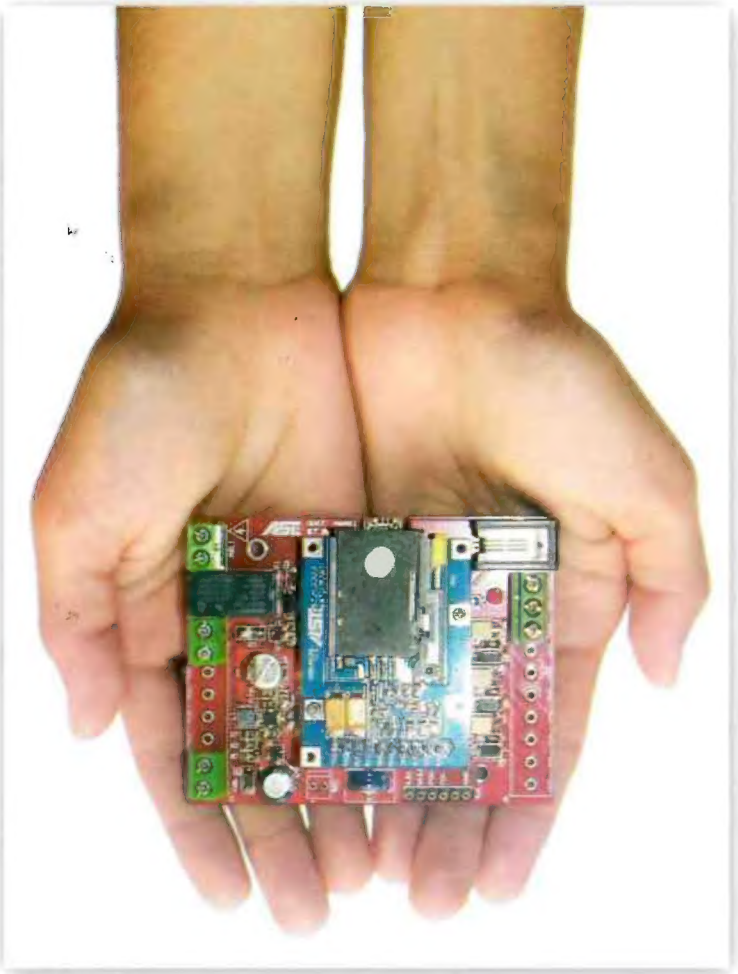


we create

ASTI undertakes research and development to strengthen and modernize science and technology infrastructure in the country.

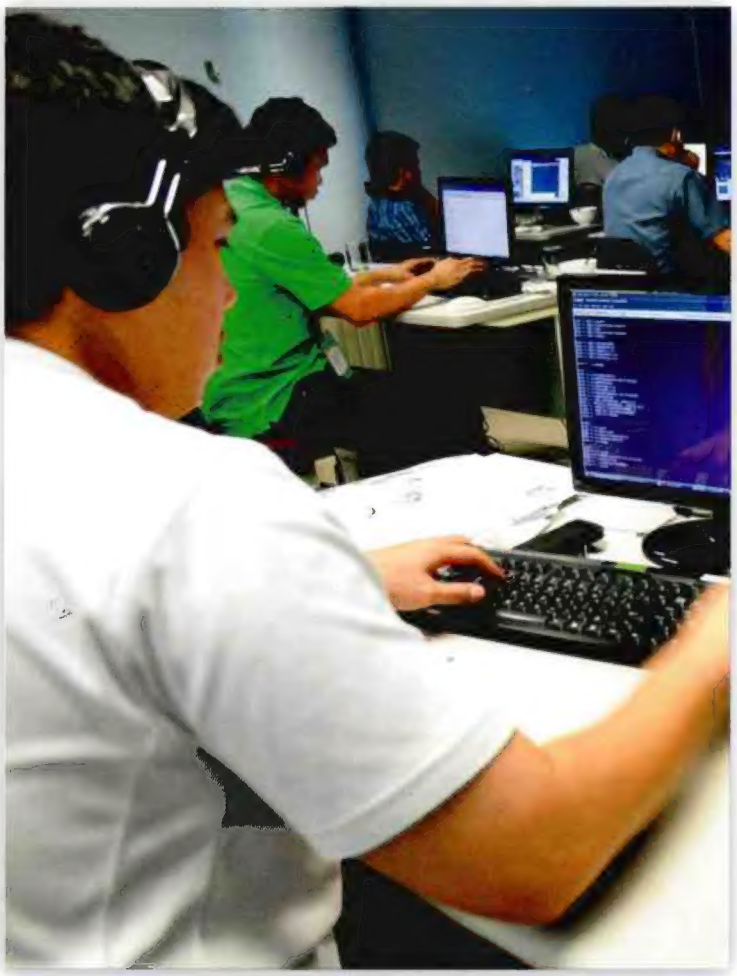


we innovate

ASTI develops simple yet cost-effective tools accessible to the local community.

we collaborate

ASTI forges synergy of expertise among its partners in achieving access to technology for the people who need them.

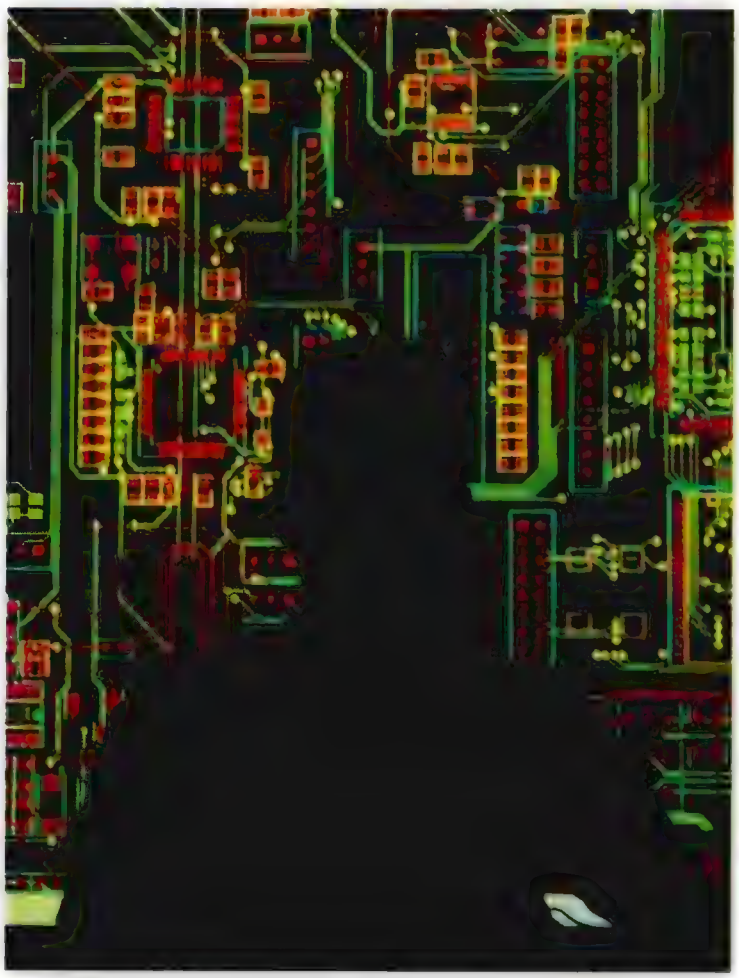


we educate

ASTI continuously aspires to become an intellectual asset to the Filipino community by updating technical competencies through advanced learning.

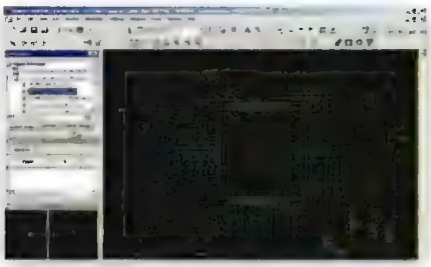
vision

The Department of Science and Technology Advanced Science and Technology Institute (DOST-ASTI) shall be among the leading R&D centers in ICT and Electronics within the Southeast Asian region.



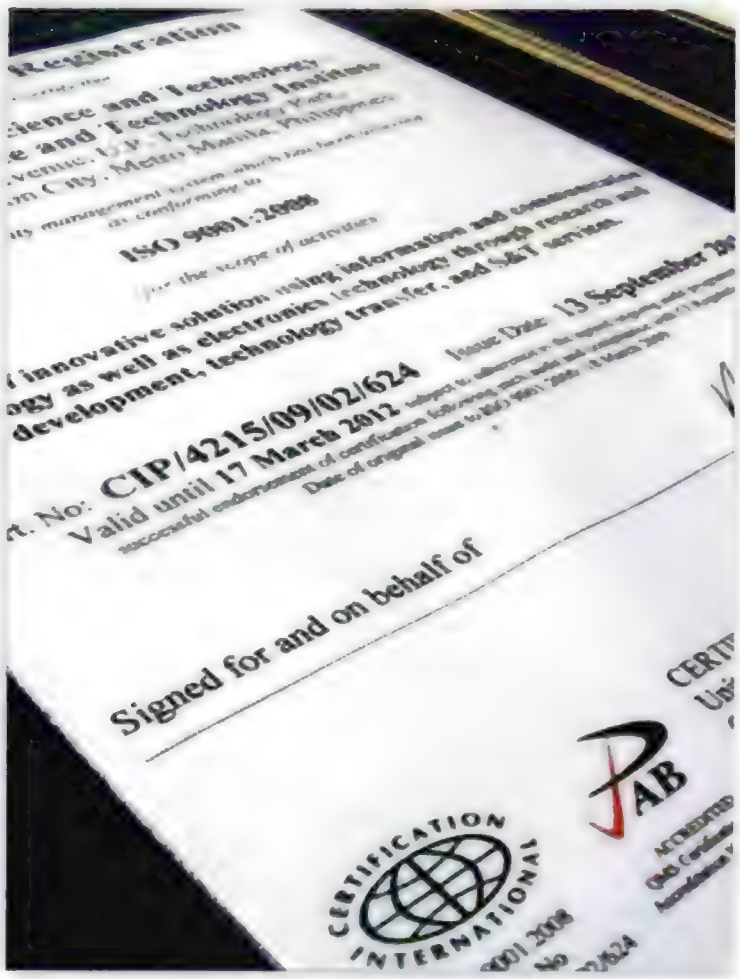
mission

We are committed to the development of the Filipino society and the Philippines as a nation. We shall contribute to the attainment of national development priorities and the growth of Philippine enterprises by providing innovative solutions using ICT and electronics technologies.



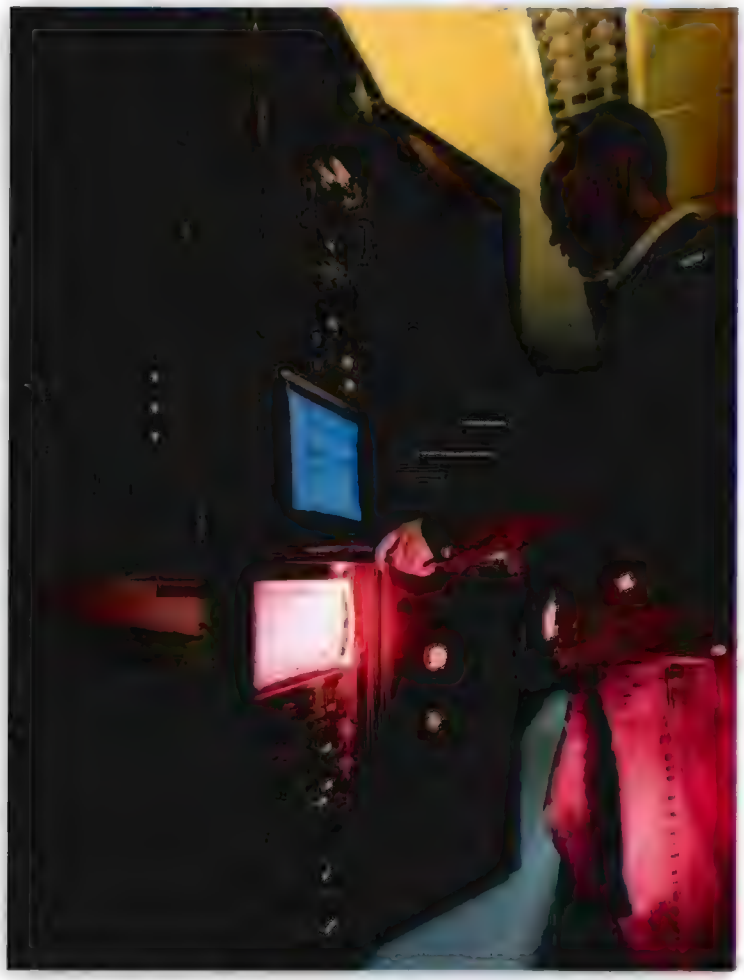
quality policy

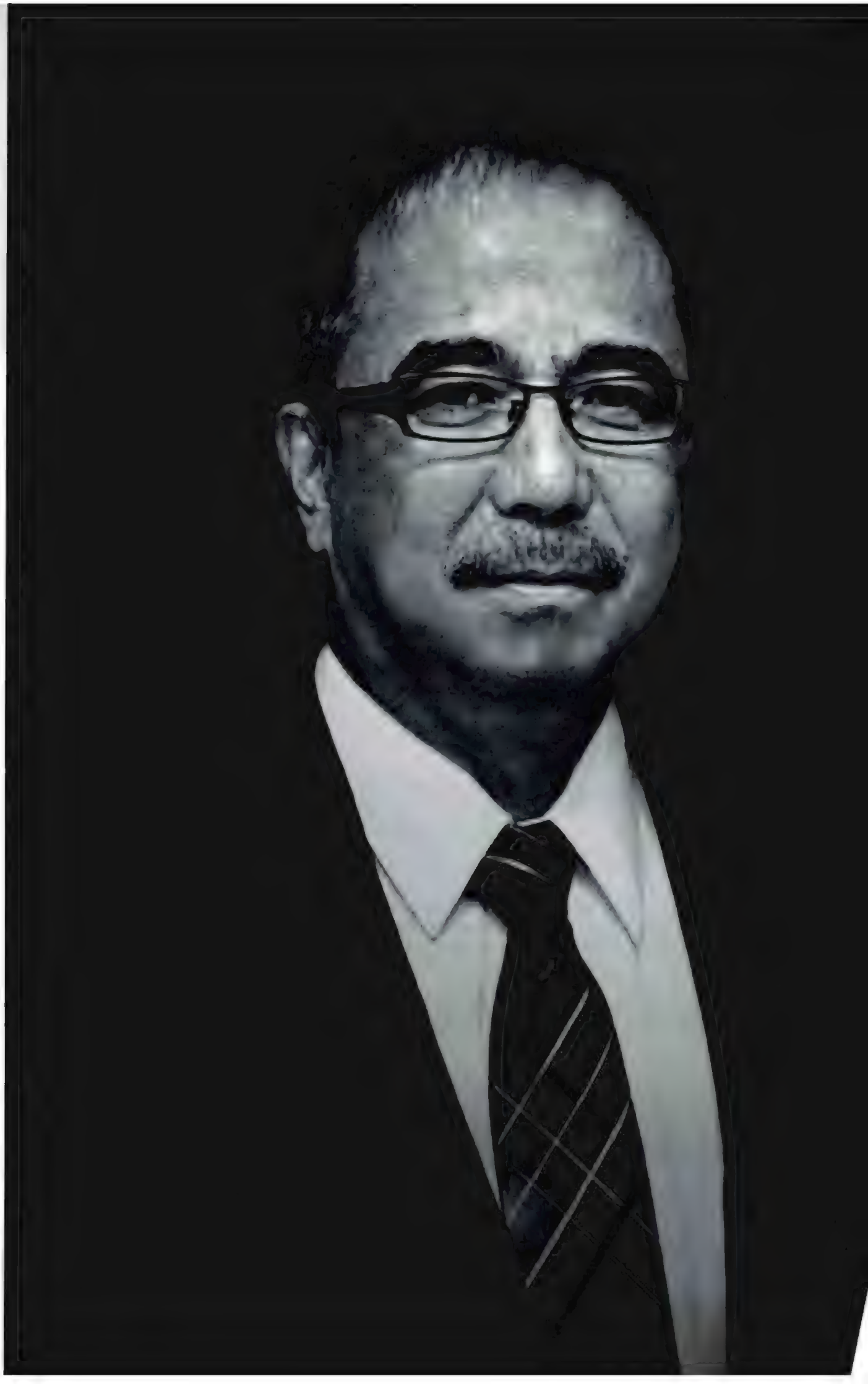
We are committed to provide innovative solutions using Information and Communications Technology, as well as, Electronics Technology to both the government and the private sectors with the highest standards of quality and reliability, within our capabilities and resources, according to customer and all applicable regulatory and statutory requirements, and to continually improve the effectiveness of our QMS at all times, in order to meet customer satisfaction.



corporate objective

The DOST-ASTI is committed to meeting its Major Final Output targets and delivering quality products and services that meet or exceed customer requirements and expectations.





I would like to congratulate the DOST-ASTI on its 25th anniversary. This silver year highlights remarkable milestones and achievements of the Agency, as it reaps the results of its endeavors that support nationa l and local disaster mitigation, e-governance, e-learning and S&T infrastructures.

Collaborations and partnerships have been the key principles by which DOST-ASTI's projects and services have been implemented. Innovation has always been at the forefront of its ICT and Electronics Research and Development. Truly, the Agency continues to harness its concerted efforts towards maximizing its potential in delivering quality localized public goods.

I am proud to say that among its high-impact projects, the DOST-ASTI has pulled it off this year, reaching a total of 266 weather monitoring stations installed nationwide. The Agency's target to more than double these devices next year is indeed a beacon of hope, especially, to underserved communities, which are highly vulnerable to calamities. With the availability of real-time and accurate weather data and information, our fellow countrymen are now empowered to adapt to the environment and climate change, mitigating adverse impacts of natural disasters like Typhoon Pablo that hit the Philippines this year.

Needless to say, the Agency's commitment to leverage ICT and the Electronics technology remains as its driving force to help in achieving national development priorities and the growth of Philippine enterprises, and become one of the leading R&D Institutions in ICT and Electronics within the Southeast Asian region.

Again, congratulations DOST -ASTI in your silver year! May you continue to make us proud with the positive outputs of your good and challenging works, and maintain your strong determination in fulfilling your mandate.

I look forward to even more fruitful years ahead.

Mabuhay!

MARIO G. MONTEJO
Secretary, Department of Science and Technology

2012 marks a significant milestone for the DOST-ASTI as we celebrate our 25th year in information and communications technology (ICT) and electronics research and development.

Around the same time that the DOST-ASTI was established, a global transition to a knowledge-based economy was emerging, where ICT and Electronics played a major role. The past two decades have seen the global impact of how ICT and Electronics have shaped, and continue to shape our lives. Locally, ASTI itself, has been at the forefront of this change, leading R&D efforts in the areas of advanced research networks, environmental and weather sensor development, process and systems automation and visualization, high performance computing, digitization, and embedded systems, among others.

As an organization, being able to adapt to changes and advances in ICT and Electronics has been key in initiating projects that are relevant and responsive to the needs of the S&T sector, as well as, contributing to national development. Over the years, we continue to evolve organizationally, as we strive to become more dynamic and proactive.

The DOST-ASTI continues to be guided by its five thematic areas that provide direction to our programs and projects: e-governance, e-environment, e-health, e-learning and enterprise development. In the next four years, we look forward to greater and more challenging tasks, including:

- scale up of our current initiatives on environmental and weather sensor development, high performance computing, storage archiving, informations systems development, and e-learning support;
- continued collaboration on high-impact ICT projects, such as Project NOAH; and Integrated Government Philippines (iGovPhils) Project; and
- establishment and operation of a national electronics product development center that will help transition the focus of local electronics industries from assembly to design.

I would like to thank the DOST Management, as well as, our partners from government, academe and industry for their continued support; our colleagues and collaborators, both locally and abroad, for the knowledge shared; and our dynamic staff, for their work dedication.

Cheers to our Silver Year!

Denis Villorente

DENIS F. VILLORENTE
Director, Advanced Science and Technology Institute

2012 Highlights

In time with the celebration of its silver year, the DOST-ASTI has successfully completed projects and started new ones, in line with the key agenda of President Benigno S. Aquino III, that is, to address the following national priorities:

- Anti-corruption, transparent, accountable and participatory governance;
- Rapid, equitable and sustained economic growth;
- Poverty reduction and empowerment of the poor; and
- Integrity of the environment/climate change mitigation and adoption.

Four (4) thematic areas (e-Governance, education, enterprise development and environment) comprising the Agency's research and development projects on ICT, electronics and embedded systems technologies, have been anchored on the aforesaid national priorities.

Using information and communications technology (ICT) as a tool to pump up participatory governance free of corruption, the DOST-ASTI, in partnership with the DOST ICT Office, spearheaded the implementation of the "Integrated Government Philippines (iGovPhil) Project," which would provide an ICT infrastructure that would ensure speedy and efficient delivery of government services to people. Relatedly, the Agency continued to pursue projects like: the "Philippine Geoportal: One Nation, One Map Project," which is being implemented, together with the National Mapping and Resource Information Authority (NAMRIA), towards a spatially enabled nation with comprehensive and consistent geospatial datasets, which are widely available and shared for sustainable economy, environment, social environment and management; the "Development of Civil Service Commission – Computerized Examination (CSC-COMEX)," which would make the civil service examination highly accessible and easy to facilitate; and the "Development of Overseas Filipinos Information System (OFIS) Project," a web-based system designed to consolidate databases of the Department of Foreign Affairs (DFA), the Bureau of Immigration and Deportation (BID), the Philippine Overseas Employment Administration (POEA and the Overseas Workers Welfare Administr (OWWA), mainly for statistics generation, as as, fast repatriation of overseas Filipinos loca crisis-prone countries.

Ongoing projects of the DOST-ASTI which ha likewise been pushing for more transparency and accountability, in joint efforts with other national government agencies, underscore higher accessibility to information and efficie integrated transactions. Such projects includ the "Development of the National Payroll Sys (NPS) and the Payroll-related Government Hu Resource Information System," aimed at aut financial transactions of the government; the "Development and Integration of the Governm Manpower Information System (GMIS) and Government Human Resource Information S (GHRIS)," which would track and manage all government agencies' manpower information facilitate payroll generation using the NPS.

Indeed, improving governance entails enhan the day-to-day operations that the DOST-AS implemented the "Adoption and Customizati the ASTI Information System" for other gover agencies like the Department of Energy, Nati Security Council, Technology Resource Cen and Office of the Solicitor General to put in place automated tools, especially, for person management, procurement and inventory, e- knowledge management, operations manag project management and directives monitori The Agency implemented also the "eDOST INFRA: Upgrading of DOST ICT Infrastructur Interconnectivity Network," under the "eDOS Program: Institutionalizing ICT within the DO System" to provide solutions to DOST strate challenges.

To allow the Agency's R&D efforts to permeate into industry and social realms, the DOST-ASTI implemented projects that build a condusive business environment that mobilize industries and attract foreign investors.

This year, the Agency introduced the "Establishment and Operation of Philippine Electronics Product Development Center," which would primarily house hardware and software tools that could be used by companies and research and academic institutions for the design, deve opment and testing of hardware and software components of their electronic products for their intended applications. The "Integration of Commercial Biomedical Device Units with CHITS and e-Triage (RxBox) Project," a multi-component program was also introduced as a telehealth intervention to respond to country's bid to reach Millennium Development Goals such as Promote Gender Equality; Reduce Child Mortality; and Improve Maternal and Health Care. Moreover, the Agency carried over this year, the implementation of the "Establishment of the DOST-PEZA Open Technology Business Incubator (DOST-PEZA Open TBI)" which has been nurturing budding entrepreneurs engaged in ICT and Electronics.

As the quality of education has been seen a
direct route either towards or out of poverty
government has taken measures to mainstr
poverty alleviation programs within the educ
sector. As a contribution to such endeavor,
DOST-ASTI, in cooperation with the DOST C
Office and its other attached Agencies, offe
affordable ICT innovations through projects
for the improvement of quality education in
country, most especially, the primary and se
levels.

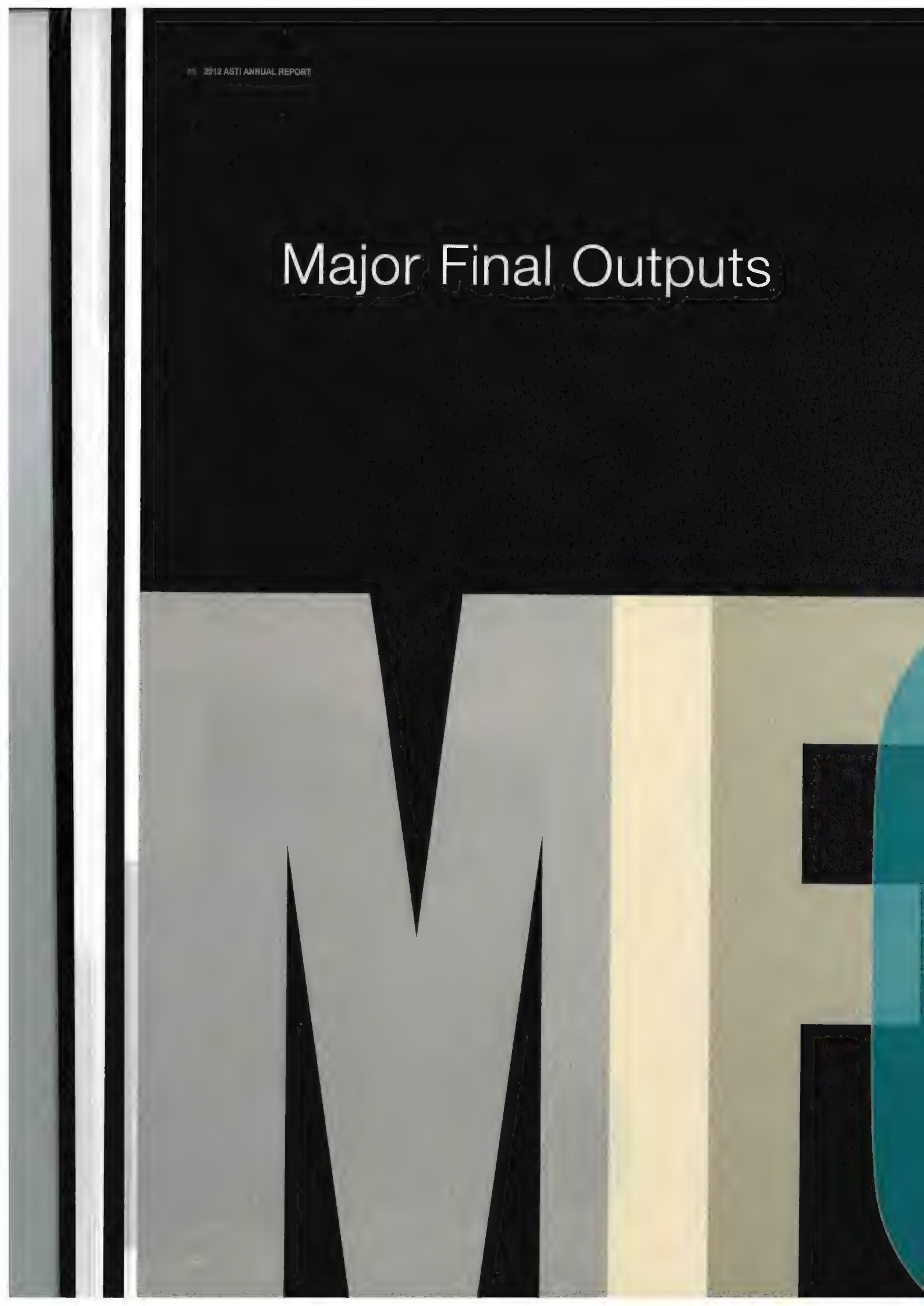
These projects include the "Capacity-buildi
Support of the Pilot Testing of the DOST Tab
Computers," which pilot tested tablet comp
the "Pilot Study of Interactive Science and
Mathematics Courseware for Secondary Le
Schools (2nd year Modules: Biology and A
and the "Development of Pilot Study Report
Revision of Interactive Science and Mathem
Courseware for Secondary Level Schools (2
Year Modules: Biology and Algebra 2)" both
which aimed at enhancing and improving st
teacher learning by utilizing e-learning mate
This year, the DOST-ASTI, together with the
SEI, conducted a series of pilot tests or Use
Acceptance Tests (UATs) of the Interactive S
and Mathematics (S&M) Courseware for sec
level schools.

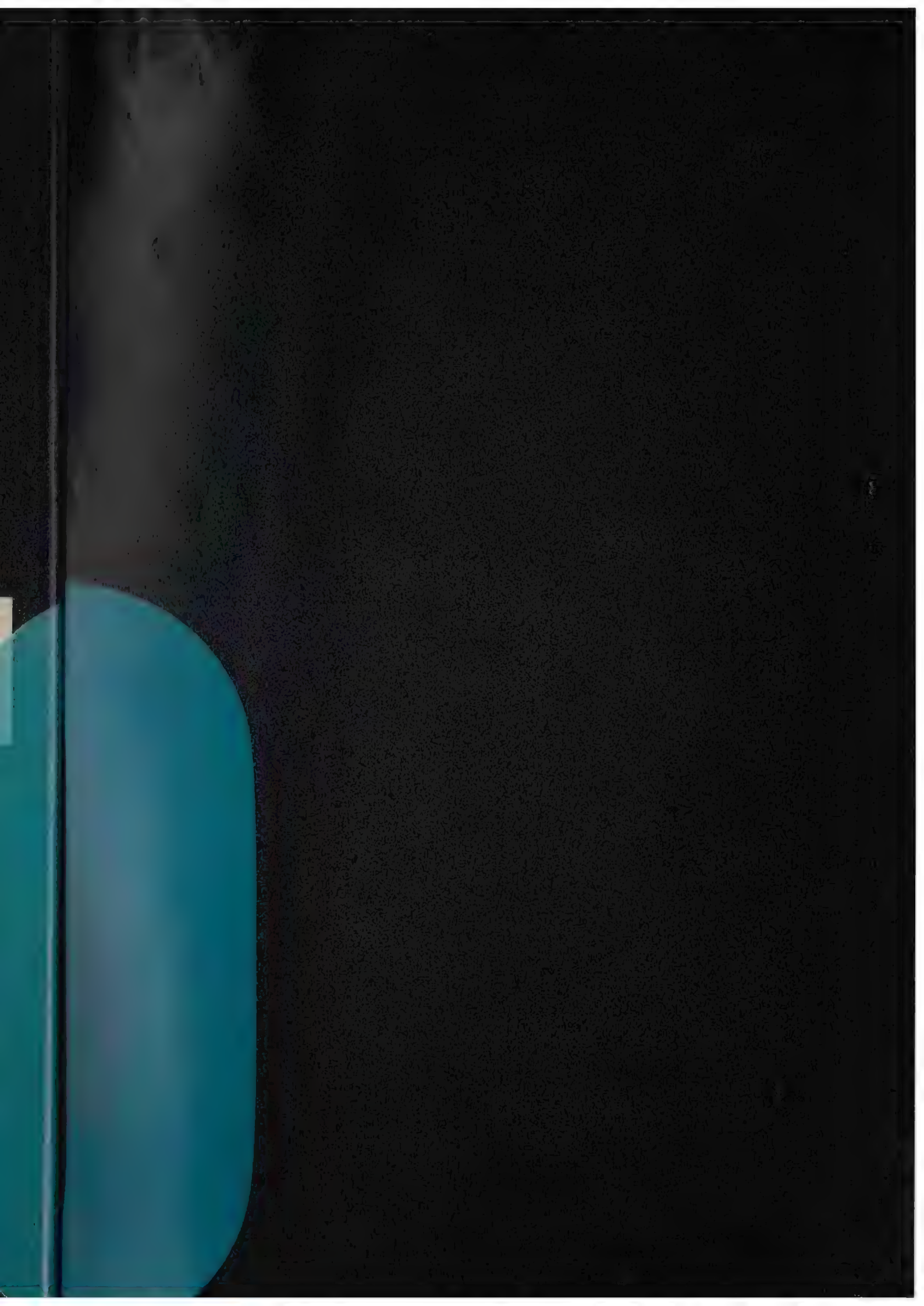
Two (2) projects establishing monitoring systems capable of generating real-time and accurate environmental data were completed this year. These are the "Development of a Field Monitor ng (FieldMon) System," which was intended for basic environmental measurement, plant/ animal monitoring and farm observations, and the "Development of a Flood Monitoring System implemented under the project "Development of a Flood Monitoring System or FMON)," which was implemented, in joint collaboration with the Metro Manila Development Authority and selected Local Government Units under the FieldMon, to obtain water level data on real-time basis.

With the onslaught of typhoons passing through the Philippines every year, the DOST-ASTI has become project heavy, optimizing ICT in mitigating the adverse impact of climate change and preventing casualties and loss of properties and lives. The Agency continued to operationalize projects such as: the "Development of Hybrid Weather Monitoring System and Production of Weather and Rain Automated Stations" to obtain accurate and timely weather data, which are processed and made accessible over the Internet, real-time; the "Emergency Distribution of Hydrometeorological Devices in Hard-hit Areas in the Philippines," a component of the Nationwide Operational Assessment of Hazards (NOAH to focus on better disaster management, particularly, in high-risk areas in the country; the "Development of a Low-Cost and Locally-Designed Meteorological Buoy," to provide low-cost and sustainable meteorological buoy system that would help improve the maritime safety, and enhance the meteorological observation system and weather forecasting capability of the country, the "Establishment of a Cost-Effective Local Tsunami Warning System for Selected High-Risk Coastal Communities of the Philippines," which, together with the DOST-PHIVOLCS, aimed to establish a local tsunami warning system aimed at warning high-risk coastal communities facing active tsunamigenic trenches; and the "Establishment of Agrometeorological Stations in Highly Vulnerable Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System (PCWM Agromet)," which is being implemented, in partnership with the Department of Agricuture - Bureau of Soils and Water Management, to develop a a weather-monitoring system for the protection of country's agriculture sector against abominable impacts of climate change and other natural disasters.

The DOST-ASTI contributed also to the implementation of projects under the "Nationwide Disaster Risk Exposure, Assessment and Mitigation (DREAM) Program" such us the: "Project 1: LiDAR and InSAR Data Acquisition," to gather nationwide spatial data in 3D to generate detailed and high resolution base and thematic maps; the "Project 3: Extracting Digital Elevation Models and Salient Features for Flood Modeling," to establish visualization of the flood modeling and hazard map; and the "Multicast Experiment using the Wideband InterNetworking Engineering and Demonstration Satellite (WINDS) Project," to help in disaster management and mitigation through disaster monitoring and fast data dissemination via the Internet.

Major Final Outputs





MFO 1: RESEARCH AND DEVELOPMENT

Rapid, Equitable and Sustained Economic Growth

Establishment and Operation of Philippine Electronics Product Development Center, New

This year marked the beginning of preparations for the establishment of the Philippine Electronics Product Development Center (EPDC). The Center would house hardware and software tools that could be used by companies or schools for the design, development and testing of hardware and software components of their electronic products for their intended applications. It shall likewise conduct technical training and development of the workforce that would utilize and manage the Center. Research and academic institutions would be encouraged to utilize the tools and equipment provided by the Center.

The facilities to be established include the EMC and Safety Test Laboratory, Printed Circuit Board (PCB) Design and Prototyping Laboratory, and Product Prototyping Laboratory. The EMC and Safety Test Lab would allow companies or schools have their products locally tested against international EMC standards for product integrity and compli a strict requirement for interr exports. The PCB Prototypin Fabrication Lab would house industry standard CAD tools provide companies access t PCB prototype development enable them to conduct in-d analyses of complicated des prior to product prototyping. the Product Prototyping Lab aid companies to fast-track p prototyping, debugging, as w as, verification of its function environmental limits.

The EPDC would not only be local electronics industry but attract foreign investors seek more conducive business en with readily available infrastru Also, once in place, local cor need not send their designs a for fabrication and compliance testing, which are more expe and would have the advantag shorter turn-around time, esp for companies, which cannot put up their own product dev facilities.

Integration of Commercial Biomedical Device Units with CHITS and e-Triage (RxBox), New

RxBox is a multi-component program introduced as a telehealth intervention to respond to the country's bid to reach Millennium Development Goals such as: Promote Gender Equality; Reduce Child Mortality; and Improve Maternal and Health Care. Medical professionals from the National Telehealth Center (NTHC) and the University of the Philippines (UP) Manila manage the RxBox program in partnership with its technical Agencies. Partner Agencies are the DOST-ASTI and the Electrical Electronics Engineering Instit (EEEI), UP Diliman. This collab aims to produce and manufac a low-cost Filipino-made mec device seen in hospitals or hi level health facilities and bring local primary health centers a Health Units (RHU), wherein m of the Filipino people seek ca

The medical device to be dev would be capable of capturing transmitting physiologic signa through its sensors. The sens could measure patient heart r activity (Electrocardiogarm or blood pressure (Sphygmoman

and blood oxygen levels (Pulse Oximeter). Best of all, it would especially assist in-patient care during pregnancy and child birth as this device could monitor mother's uterine contraction (Tócometer) and baby's heart rate (Fetal Heart Rate).

Under this project, the DOST-ASTI would enhance capacities of commercially available biomedical device by integrating it into an Electronic Medical Record (EMR) called Community Health Information Tracking System (CHITS) installed in netbooks. This system that would be created shall be deployed in 15 sites, nationwide, to serve as an experiment and testing device. Learnings from this deployment would be used as a reference in producing locally made Electronic Natal Assistive Intervention (eNai).

Simultaneous with DOST-ASTI's integration to CHITS and reverse-engineering, the eNai, managed by the EEEI, would be created in series, and tested, nationwide. Learnings from their previous prototypes and DOST-ASTI's experience would be applied in their final product. The final eNai product would then be mass produced. The device would also be capable of teleconsultation, wherein clinical specialists would be able to attend the patients in Geographically Isolated and Disadvantaged Areas (GIDA) communities through the assistance of local health workers. Clinical specialists may reach local health units through video-conferencing while the RxBox team would be looking into the possibility of sending electronic messages without violating privacy issues.

As part of the testing and fulfilment of the program, the RxBox team would be training local health workers, who would, in turn, assist the former in its research and development work. Moreover, health workers would incorporate the system into their everyday work flow. In October 2012, a dedicated group of software and hardware specialists and medical professionals was organized to communicate with their prospective volunteer communities and procure commercially available devices and eNai sensors and parts.

Establishment of the DOST-PEZA Open Technology Business Incubator (DOST-PEZA Open TBI), Continuing

Under the management of the Technology Resource Center and with the technical expertise and assistance being provided by the DOST-ASTI, the DOST-PEZA Open TBI continued to nurture budding entrepreneurs engaged in ICT and Electronics. A total of 14 local companies qualified and opted to locate and operate their businesses in this DOST- and PEZA-assisted facility. Among these incubatees were Krayno Green Technologies, Itemhound, Wikonec, Auberon Solutions, Tarsius Inc., GSMetrix Technology Solutions Inc., Metahelix Management Information, Orchestronix Corp., Basecamp Technologies Inc., Stride Consulting Inc., Sparkscom Technologies Inc., Bizalliance Corp., Version 791 Inc., JLT IT Solutions Resource.

Anti-corruption/ Transparent, Accountable and Participatory Governance

Integrated Government Philippines (iGovPhil), New

The iGovPhil is a joint project of the DOST-Information and Communications Technology (ICT) Office and the DOST-ASTI. It came at the heels of the release of Executive Order No. 47 s., 2011 stating the need for an ICT infrastructure that would ensure the delivery of speedy and efficient government services to people. The project is part of Aquino administration's campaign to achieve the "daang matuwid" --- an accountable, efficient and transparent government. Among its plans are to:

- Build data centers that would host all project applications;
- Link up relevant government data centers and databases;
- Secure government-shared network, payment syste and single sign-on porta
- Set up a government-wide email and task collaboration system; ar
- Set up a government-shared network facility.

This year, the project procur and started to set up the req infrastructure, conducted nu brainstorming, meetings and consultations with stakehold forged agreements and cont partner-agencies.

In 2013, it is expected to set additional ICT infrastructure, develop additional shared se and enhance, integrate availa applications, among others.

Philippine Geoportal: One Nation, One Map Project, Ongoing

The DOST-ASTI, in collaboration with the National Mapping and Resource Information Authority (NAMRIA), which is attached to the Department of Environment and Natural Resources, officially implemented the Philippine Geoportal project last 19 July 2011. This year, it has completed the following deliverables:

- Installation of primary and secondary links of NAMRIA-Taguig and -Binondo offices;
- Conduct of basic and advanced trainings for NAMRIA network administrators;
- Deployment and configuration of VOIP servers;
- Procurement of necessa equipment such as swit routers, among others; a
- Ongoing network config and access point testing

All main project deliverables, including platform for the cou national spatial data infrastru geospatial data center, an Int based mechanism for sharing geospatial information, and a government's one-basemap would be accomplished on o 31 August 2014.

Development of Civil Service Commission – Computerized Examination (CSC-COMEX), Ongoing

This year, the "Development of Civil Service Commission - Computerized Examination System (CSC-COMEX)" focused on the coding of system modules after the Software Requirements Specification (SRS) was finalized. The first three (3) accomplished modules are as follows:

1. Examination Application Registration (EAR) Module through which, all interested applicants could register online through the CSC website;

2. Examination Slot Reservation (ESR) Module through which, a registrant or prospective examinee could reserve a slot for a particular examination indicating his/her preferred date and time of personal appearance at the CSC, date and time of examination, and examination venue; and

3. Examination Slot Confirmation (ESC) Module through which, applicant's digital photograph, signature and biometric fingerprint could be captured on the scheduled date/time of personal appearance, and all basic information provided during the ESR would be validated by the processors.

After the coding, iterations of testing and debugging were accomplished. Also, five (5) User Acceptance Testing (UAT) Workshops were held from March to December 2012. The purpose of the UAT is to: a) verify if the system developed, conforms to the SRS set by CSC; b) verify if previously found bugs were already fixed; and c) promote each functionality for acceptance if already acceptable (as one passes the tests executed by the CSC).

Lastly, System Analysis and Design (SAD) for the remaining modules were accomplished to initialize the development, testing and debugging of the remaining modules for the succeeding year. Upcoming activities include LAN Cabling Audit, End to End UATs, Network Training, System Administrator Training and End-User Training.

Development of Overseas Filipinos Information System, Ongoing

The Overseas Filipinos Information System (OFIS) is a web-based system designed to consolidate the databases of the Department of Foreign Affairs (DFA), the Bureau of Immigration and Deportation (BID), the Philippine Overseas Employment Administration (POEA) and the Overseas Workers Welfare Administration (OWWA). The system is aimed at generating statistics of the number of Filipinos in a particular time and place abroad, to help facilitate the repatriation of overseas Filipinos located in crisis-prone countries.

OFIS would also include a facility that allows Overseas Filipinos (OFs) to register themselves to the system and update their respective locations. Philippine consulates and embassies would also have the facility to update the location and/or whereabouts of the OFs.

OFIS is expected to be lauched in July 2013, in time with the State of the Nation Address of his Excellency Benigno Simeon S. Aquino III.

For the continuous improvement of the system, a Phase II of the project is already being discussed. The second phase of the project is expected to include functionalities as ne the Shared Government Info System for Migration (SGISM use of other concerned Age

Development of the National Payroll System and the Payroll-related Government Human Resource Information System, Ongoing

The development of the National Payroll System (NPS) and the payroll-related Government Human Resource Information System (GHRIS), in line with the Executive Order No. 55 s., 2011, mandating the creation of a Government Integrated Financial Management Information System (GIFMIS) and aimed at automating financial transactions of the government primarily for transparency and policy-making purposes, are just some of the systems that would be developed under the GIFMIS program.

The DOST – National Computer Center (NCC) and the DOST-ASTI are the Agencies assigned to develop both systems. The NPS, which is being developed by the DOST-NCC, is a centralized payroll envisioned to generate payro the national government age for a more efficient disburser employees' salaries.

On the other hand, to facilita development of the NPS, the ASTI has been assigned to c centralized employee record the GHRIS. The NPS and the related GHRIS were pilot tes (6) agencies: the Bureau of T (BTr), the Commision on Auc the Department of Budget ar Management (DBM), the Dep of Finance (DoF), the DOST-I the DOST-ASTI.

Series of trainings were cond facilitate pilot testing of the s set-copy of the system files, requirements specifications (and users manual has been s the DBM and the COA. The p expected to end in June 201

Development and Integration of the Government Manpower Information System and Government Human Resource Information System, Ongoing

In August 2012, a Memorandum of Agreement (MOA) between the DBM and the DOST-ASTI was executed for the development and integration of the ASTI-developed GHRIS and the Government Manpower Information System (GMIS) of the DBM.

The GMIS is an online web a that tracks and manages all r government agencies' autho positions with their correspo categories, classification and compensation. The GHRIS, o other hand, was initially deve facilitate payroll generation us National Payroll System (NPS

To further extend the functior of the GHRIS, the GMIS woul be integrated into the GHRIS The integration shall streamli overlapping functions of both

allowing users of both systems, including users of NPS, to cull more accurate data and reports on government manpower resources.

In February 2013, the technical team working for the GMIS-GHRIS project came up with a Terms of Reference that would allow the acquisition of an out-of-the-box software that would answer the GMIS, GHRIS and NPS requirements of the National Government.

Adoption and Customization of the ASTI Information System for the Department of Energy, New

The adoption of the ASTI Information System (Infosys) by the Department of Energy (DOE) commenced in 2012. After the signing of the MOA, the DOST-ASTI team proceeded with the customization of the following modules: 1) Personnel Management; 2) Procurement and Inventory; 3) Knowledge Management; 4) Operations Management; and 5) Project Management to fit the requirements of the DOE. Aside from these, two (2) new modules, the Downstream Oil Monitoring and the Energy Statistics, are expected to be developed to be used as a repository, and for generating reports for all Downstream Oil and Energy data.

The DOE would have its training on the use of the Personnel Management system on 02 April 2013 – 03 April 2013. covering modules such as Employee Records, Personal Data Sheet, Daily Time Record, Leave Application and Pass Slip. The next training for DOE is set on the 3rd or 4th week of April 2013 to cover other modules on Personnel Management and Equipment Inventory.

Customization of the ASTI Information System for the National Security Council, Ongoing

Similar to DOE's, the National Security Council (NSC) executed a MOA with the DOST-ASTI, for the adoption of the above-mentioned five (5) Infosys modules. Three (3) new modules, namely, e-Library, News Clippings, and Directives Monitoring would be designed and developed and eventually, integrated into the ASTI Infosys. The e-Library module is a modified document dissemination system that would include facility for approving article postings based on the issues and topics identified by NSC. The News Clippings module would consolidate scanned newspaper clippings, which would be used for intelligence purposes. Lastly, the Directives Monitoring module would create consolidated and concise directives records based on the issues and decisions agreed upon in meetings convened by the NSC.

On 16-17 April 2013 the NSC employees would undergo training on System Administration. The end-user training is set to happen on 23-24 April 2013.

Customization and Adoption of the ASTI Information System for Technology Resource Center, Completed

The customization of four (4) software modules, namely: Knowledge Management; Operations Management; Personnel Ma and Procurement and Inven Management was accompli based on the specifications Technology Resource Cente module for Acquired and Co Assets Management was al developed.

Adoption and Customization of the ASTI Information System for Office of the Solicitor General, Completed

All activities and deliverables under this project were completed this year. The design, development and customization of the Person Sheet, Employees Records and Equipment Inventory sy accomplished also. Moreove training on these customize was conducted.

eDOST Program: Institutionalizing ICT within the DOST System

Project 1: eDOST INFRA: Upgrading of DOST ICT Infrastructure and Interconnectivity Network, Ongoing

The eDOST-INFRA is aimed at providing adequate and reliable infrastructure and interconnectivity among DOST Agencies, DOST-Regional Offices, Provincial Science and Technology Centers (PSTCs) and Urban Science and Technology Centers. In its three (3)-year implementation, the project provided solutions to DOST strategic ICT challenges, which include insufficient hardware resources, conges low-bandwidth connectivity insufficient manpower with e or skills to support and sust related activities.

As the project continued the of data links to the Philippine Council for Agriculture, Aqua Natural Resources Research Development (PCAARRD) ar regional consortia in 2011, it on settling all its financial ob to telecommunication compa concerned, as well as, on m and maintenance of network and use of DOST-Central Of PCAARRD, and PCAARRD R Consortia in 2012.

Poverty Reduction and Empowerment of the Poor

Capacity-building in Support of the Pilot Testing of the DOST Tablet Computers, Ongoing

This project seeks to contribute to the improved delivery of educational content, especially, in the primary education, and consequently, to the improvement of the quality of Philippine education. By utilizing efficient and affordable innovations in ICT, students could adapt to new ways of learning in this information age.

The project aims to provide the required number of tablet computers for the pilot testing, its applications, as well as, technical support and training on how to properly use it. It is intended to complement DOST-SEI's project entitled, "Technology Package for Student Learning Empowerment: Pilot Testing of Courseware and Tablet PC." It uses the specifications recommended in the project, "Research Study on Low-cost Computing Solutions for Primary Education." The pilot testing involved the deployment of tablet computers to selected primary schools in different regions, nationwide. A steering committee, composed of representatives from DOST, DepEd, DOST-SEI, DOST-ASTI, UP NISMED and Ateneo de Manila University, were created for the pilot testing. The steering committee identified 10 Grade 1 public schools from five (5) regions with two (2) schools in every region, as the target audience for the pilot testing. San Agustin and Fourth State Elementary School in NCR, San Nicolas and Pasuquin Elementary School in Region I, Lores and Tanauan North Central Elementary School in Region IVA, Cong. A.T. Aguja Memorial Central and Cassidy Elementary School in Region XIII, and Jasaan and Kimaya Elementary School in Region X, were among those schools involved in the pilot testing.

This project handled the procurement of tablet computers, including the identification of appropriate software applications for primary education. Capacity-building through the conduct of user training and technical support for end-users were likewise integrated in this project to equip the selected end-users with skills needed to use the tablet computer. Technical support and training are crucial support activities prior to the conduct of a pilot testing, to be able to help end-users adapt to this new technology. Moreover, the project adopts a stakeholder approach and shall hold consultative dialogues with various stakeholders, including the DepEd, SEI and local electronics designers and manufacturers to validate if the design and specifications of the learning tool are appropriate for basic education.

Pilot Study of Interactive Science and Mathematics Courseware for Secondary Level Schools (2nd year Modules: Biology and Algebra), Completed

To help address the challenges to the quality improvement of Philippine education, the DOST thru its attached Agencies, ASTI and SEI, proposed the courseware project to develop interactive e-learning materials. The project aims to enhance and improve student-teacher learning by utilizing efficient and affordable new solutions and innovations in ICT.

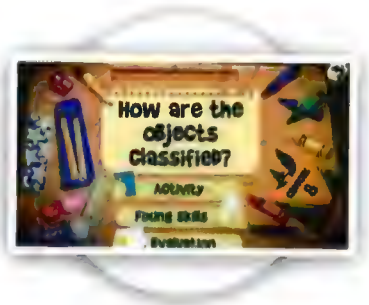
The contents of lessons were based on the Learning Competencies of the National Basic Education Curriculum of the DepEd. Teachers from different secondary level schools and teams of experts from different Universities/

Institutions were involved in script writing, for the lessons, and during the review of digitized modules.

The courseware for secondary schools practically covers all the topics in said learning competencies, specifically composed of science and mathematics lessons. The courseware contains digitized lessons, which provide simulations, animated graphics and images with synchronized voice-overs. Ccomputer-based lessons are aimed at carrying the trademark as "DOST Courseware" to distinguish it from other existing educational materials as highly interactive, locally-produced and of international standard.

In 2010, the team digitized 133 modules on first year science and mathematics. The modules were composed of diversified story lines and several dozen of characters.

Subsequently, the team crea new standards and systems development of the second school lessons (Biology and 2). As conceptualized, there be a variety of societies coe in the same world, each per to a different kind of genre w aims to hold the interest of t The project team then came three (3) themes chosen to c societies with science fiction and adventure. This in turn l creation of the three (3) worl Courseware, namely: "Techn "Magicademy" and "D'nayac three (3) worlds and new cha used for the second year sci mathematics high school les were presented and approve the DOST-SEI and experts in At the end of the project dur February 2012, the team con the digitization of 98 lessons



Development of Pilot Study Report and Revision of Interactive Science and Mathematics Courseware for Secondary Level Schools (2nd Year Modules: Biology and Algebra 2), Completed

This year, the DOST-ASTI, together with the DOST-SEI, conducted a series of pilot tests or User Acceptance Tests (UATs) of the Interactive Science and Mathematics (S&M) Courseware for Secondary Level Schools.

The pilot testing of the S&M courseware modules was conducted in March 2012. The study aimed to assess the acceptability and appropriateness of the digitized lessons to second year high school students. The result helped the project team in determining the necessary modifications, enhancements and further development of t courseware.

A total of 98 S&M modules w tested to 167 second year hi students from eight (8) regula high schools. The pilot test in the conduct of the following Orientation; Administration of Survey Form 1; Modules Test Administration of Student Su 2; and Focus Group Discussi

Based on the pilot test report were positive; student-partici enjoyed the experience of us evaluating the courseware m Also, the project team took n students' suggestions, comm and preferences gathered du conduct of pilot test. The cou modules were assessed base the following elements: Hyper

Interactivity, Animations, Simulations, Graphics/Pictures, Sound, Story/Plot, and Lesson Content. The project team assessed all data/information that were gathered and implemented appropriate actions. The team applied necessary revisions on the 98 courseware modules and recommended new standards in the enhancements and development of modules for immediate implementation.

Integrity of the Environment/ Climate Change Mitigation and Adaptation

Development of a Field Monitoring (FieldMon) System, Completed

The FieldMon Project aimed at establishing a field monitoring system capable of real-time and accurate measurement of agricultural information. The field monitoring stations developed were composed of distributed sensing devices such as application specific sensors, network camera and wireless LAN module. The multi-sensing system of stations can acquire significant agricultural parameters. It is capable of acquiring significant agricultural parameters such as temperature, humidity, solar radiation and soil moisture. Other sensors could be optionally added in order to support monitoring of leaf wetness, ultraviolet radiation and pest accounting. Information from these sensing devices could be used for basic environmental measurement, plant/animal monitoring and farm observations.

Before the project concluded, it completed the deployment of eight (8) field monitoring stations at the Philippine Rice Research Institute stations in Muñoz, Nueva Ecija, Batac, Ilocos Norte, San Mateo, Isabela, and Ligao City, Albay.

Development of a Flood Monitoring System (implemented under the project "Development of a Field Monitoring System or FMON), Completed

The development of a Flood Monitoring System was implemented by the DOST-ASTI, in joint collaboration with the Metro Manila Development Authority and selected Local Government Units under the project titled, "Development of a Field Monitoring System." With this project, agencies concerned developed and deployed a number of Water Level Monitoring Stations (WLMS).

WLMS is a stand-alone system that consists three (3) major components, namely, remote monitoring stations, communication network and data center. It is used to determine and measure the rate of change of water level in critical flood-prone areas throughout the Philippines.

Prior to the termination of the project, 37 units of WLMS were deployed within Metro Manila and 13 units in the following areas: Wawa Dam in Rizal; Lawigan Bridge in St. Bernard, Leyte; Hitongao River in Southern Leyte; Cahigon Bridge in Maasin, Iloilo City; Pagsangaan Bridge in Brgy. Pavia, Iloilo City; Jaro Bridge in Iloilo City; Port Area in Basco, Batanes and in Brgy. Walled City, Jolo, Laguna Lake Development Authority in Brgy. Looc, Cardona, Rizal, Buntun Bridge in Brgy. Buntun, Tuguegarao; Abuno Bridge and Madulog Bridge in Iligan City, and Cabula Bridge in Bukidnon.

Development of Hybrid Weather Monitoring System and Production of Weather and Rain Automated Stations, Ongoing

Obtaining accurate and timely weather data are key to a more prepared Philippines. The project takes off from the ICT for the Environment Program of the DOST-ASTI, with the aim of developing and deploying 80 AWS and 100 ARGs, in strategic areas across the country. A web-based weather monitoring is likewise created, whereby all data acquired from remote stations are collected and further analyzed. All processed data are easily accessible over the Internet, in realtime.

In 2012, the project accomplished the following:

- Installation of 79 AWS and 99 ARGs;
- Conduct of four batches of Broadband Global Are Network Refresher Traini
- Upgraded firmware and i satellite communication c in five deployed AWS;
- Calibrated six AWS and 23 ARG sensors;
- Development of visualiza tool with map, graphical tabular representation; ar
- Monitoring of all deployed AWS and ARGs.

In 2013, the project is expecte undertake the following activi

- Installation of 10-meter p in selected AWS sites;
- Continuation of the deployment of the satellit communication capability
- Continuation of calibratio deployed AWS and ARGs
- Continuous monitoring of deployed AWS and ARG.

Emergency Distribution of Hydrometeorological Devices in Hard-hit Areas in the Philippines, Ongoing

The HYDROMET is one of the components of the Nationwide Operational Assessment of Hazards (NOAH) Project, which focuses on better disaster management, particularly, in high-risk areas in the country. The project aims to assemble and install 400 Water Level Monitoring System (WLMS) and 600 Automated Rain Gauges (ARGs) across the 18 major river basins in the Philippines.

On its first year of implementa project has:

1. determined the deployment sites;
2. reviewed and revised AF and WLMS design;
3. assembled 100 ARG and 200 WLMS;
4. installed three (3) ARGs and three (3) WLMS in Cagayan de Oro; and
5. conducted an informatio education campaign (IE Region X. Before the yea ends, it is expected that trainings and IECs would conducted, and 1,000 st would be completely inst

Development of a Low-Cost and Locally-Designed Meteorological Buoy, Ongoing

The project aims to develop a low-cost and sustainable meteorological buoy system that would help improve the maritime safety, and enhance the meteorological observation system and weather forecasting capability of the country. The project would deploy two (2) moored met buoys capable of real-time data acquisition and equipped with sensors, which would collect and measure wind, relative humidity, air temperature, barometric pressure, rainfall and sea temperature.

Met buoys would be deployed at the sea, around five (5) kilometers away from the shoreline. For effective and sustained communication, the GSM/GPRS technology would be utilized as the primary communication. The system would automatically switch to satellite communication mode if the GSM/GPRS network is down or not available. The DOST-ASTI would maintain a central server wherein all data acquired by met buoy sensors would be consolidated and processed. A management system software would be developed for data interpretation, visualization and archiving. The processed data would be made available to the DOST-PAGASA, as well as, other authorized users such as disaster response organizations and local government units.

In 2012, the project focused on the design and development of meteorological buoy such as study of existing buoy designs, identification of different sensors and electronic components, functionality test of modules, development of virtual prototype, development of intelligent control system, fabrication of mechanical parts, among others. In 2013, the project is expected to finalize the design, conduct survey on the pilot test site, and conduct pilot testing.

Establishment of a Cost-Effective Local Tsunami Warning System for Selected High-Risk Coastal Communities of the Philippines, Ongoing

Having same intentions, the DOST-ASTI and the DOST-PHIVOLCS joined forces for this project, in order to establish a local tsunami warning system aimed at warning high-risk coastal communities facing active tsunamigenic trenches, such as Lubang Island, Manila Bay, Subic Bay, Albay Gulf, and Lingayen Gulf.

In 2012, the project accomplished the following:

- Acquisition of supplies, materials and components;
- Recon survey and negotiation of possible detection sensor sites and mass alerting siren sites;
- Research work and design of interface board and board fabrication;
- Scouting of wider area/high output siren (selection, purchase and delivery of siren model);
- Production of GSM data communication modules;
- Production/assembly of warning sirens system units;
- System integration and testing; and
- Information and Education Campaign with local communities at deployment sites.

The project officially started on 1 September 2011 and has been extended until 31 August 2013, for the finalization of project's remaining deliverables.

Establishment of Agrometeorological Stations in Highly Vulnerable Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System (BSWM-Agromet), Ongoing

The Bureau of Soils and Water Management (BSWM)-Agromet Project is a collaborative effort of the BSWM, which is attached to the Department of Agriculture (DA), and the DOST-ASTI. The project aims to develop a weather-monitoring system for the protection of country's agriculture sector against abominable impacts of climate change and other natural disasters. Said weather monitoring system would improve disaster and climate change preparedness by obtaining ac and timely agrometeorologica to be disseminated to resourc upland farmers and communi

The project start-up undertak which were completed during nine (9) months of implementa include the following:

- Assembly of 62 agromet
- Shipment of 54 agromet to DA-Regional Field Unit
- Installation of 27 stations DA-Regional Field Unit (r assisted the DA-BSWM);
- Conduct of Agromet Insta Training in Bulacan, Cavit and Davao del Norte; and
- Ongoing development of visualization's map, tabul and graphical views.

Nationwide Disaster Risk Exposure, Assessment and Mitigation (DREAM) Program

Under the leadership of Dr. Enrico Paringit of the UP Training Center for Applied Geodesy and Photogrammetry (UP-TCAGP), the DREAM Program continued its pursuit of developing a three-dimensional (3-D) national elevation and resource information data set which are tremendously crucial to risk management and disaster response. The DOST-ASTI has contributed to the implementation of the following DREAM projects:

Project 1: LiDAR and InSAR Data Acquisition, Ongoing

To enable the UP-TCAGP to proceed with the gathering of the much needed nationwide spatial data in 3D that would be used to generate detailed and high resolution base and thematic maps, the DOST-ASTI has outsourced the procurement major equipment for this proje equipment include the Light D and Ranging (LiDAR) System Interferometric Synthetic Ape Radar (InSAR) Data Acquisitio allow collection of accurate e data under any weather cond After strict conformance with government procurement rule procedures, the contract for t supply, delivery and installatio one (1) set of brand new Integ Topographic LIDAR Scanner Metric Aerial Camera System (1) set of brand new Fully Inte Topographic Lidar and Bathy (Shallow Water) Lidar was aw to Optech Incorporated, base Ontario, Canada. These state the-art equipment were delive the DOST-ASTI in August 201 the delivery, an intensive train the UP-TCAGP team who wo involved in the equipment ope and data collection was cond Optech's technical experts.

Project 3: Extracting Digital Elevation Models and Salient Features for Flood Modeling, Ongoing

The implementation of this project was spearheaded by the UP TCAGP. This component has been developing the Digital Surface Model (DSM) and Digital Terrain Model (DTM) of each watershed and floodplain area in the country. The DOST-ASTI provided technical assistance in the visualization of the flood modeling and hazard map prepared by the project team.

Multicast Experiment using the Wideband InterNetworking Engineering and Demonstration Satellite (WINDS) Project, Ongoing

The WINDS is a project undertaken, in cooperation with the Japan Aerospace Exploration Agency (JAXA). It facilitated the adoption of collaboration-style distance education for regional conferences and lectures and the development of e-Learning materials for human resource development, Information Technology engineers and instructional designers. In 2012, the UP Diliman, the Chulalongkorn University and the Tokyo Institute of Technology conducted an experiment using the WINDS infrastructure.

The WINDS likewise helped in disaster management and mitigation. The Sentinel Asia, a voluntary-based initiative led by the Asia-Pacific Regional Space Agency, utilized WINDS in disaster monitoring and fast data dissemination via the Ineternet. Different disaster organizations in the country acquired information from Sentinal Asia with the DOST-ASTI's assistance. Several disaster-related data were transmitted using the WINDS infrastructure in 2012 among which, were Sentinel Asia's satellite data images and observation data, which were requested by the DOST-PHIVOLCS.

MFO 2: TECHNOLOGY TRANSFER

Technology Commercialization

In 2012, significant increase of technology inquiries were catered specifically with the ASTI-developed Automated Rain Gauges (ARG), Automated Weather Stations (AWS), and Water Level Monitoring Stations (WLMS). These generated new advocates/partners to use these devices with the intention of weather data collection and observation in aiding disaster mitigation and preparedness in their locality. Government agencies alongside their local government unit (LGU), academic community, and non-profit organizations were quick to realize this benefits of the devices.

Among the first to secure fabrication were DOST Regional Offices 6 and 9, with the coordination of their LGUs to beef up their disaster management and preparedness programs through installed ARGs and WLMS units.

Further, exploratory talks we conducted with various ager as the Department of Agricu Regional Field Units, Depar Environment and Natural Re Regional Office Lanang Dava (DENR XI), University of the P Los Banos (UPLB), and Mari Marcos State University (MM National Hydraulic Resource (NHRC), University of the Phi - Baguio, and Nueva Vizcaya University each with their ow requirements for their projec

A total income of P167,800 w generated from above-menti technology commercializatio It is expected that in the follo years more technology trans agreements will ensue from sectors due to efforts in mon changes in weather brought climate change.

Technology Diffusion

To hasten transfer and adoption of ASTI products and technologies, the Agency persistently implements various diffusion strategies such as product presentation, demonstration and launching and participation in technology exhibits. For 2011, the DOST-ASTI was able to promote its products and services to about 15,286 clients from various schools and universities, government agencies, and a number of private institutions.

MFO 3: SCIENCE & TECHNOLOGY SERVICES

Philippine Research, Education and Government Information Network (PREGINET)

PREGINET is the only research and education network in the Philippines, which interconnects and catalyzes research among academic, government, and research institutions. It is a high-speed data communication network dedicated to cater the needs of the academic and research communities, particularly, in exchanging and processing high volume of critical data since it guarantees a dedicated capacity to support crucial research applications.

PREGINET has been contributing in the development of scientific community and in addressing local concerns in the country. Some of the contexts that it facilitates are world-class collaborative research, education or e-Learning, disaster management and mitigation and telemedicine. It also offers the followings services:

Enhanced Communication Services

- Video Streaming
- Video Conferencing
- Voice over IP

Other Value-Added Services

- Network and Internet Connectivity
- Internet Protocol version 6 (IPv6)
- Multicast
- Philippine Open Internet Exchange
- Server Co-location
- Technical Consultancy
- Web Hosting

PREGINET pursued its advocacy on the adoption of IPv6 in the country. In fact, the PREGINET Team organized the World IPv6 Launch in the Philippines on 06 June 2012. The celebration aims to gather opinions of ISPs, experts, policy makers and other IPv6 enthusiasts, who are working mainly towards IPv6 migration and similar tasks. Foreign speakers from Malaysia and Japan were invited to present their expertise and case studies. The PREGINET Team likewise co-organized the "IPv6 Unleashed: the 2nd Philippine IPv6 Conference and Training Workshop" on 23-27 April 2012 in Cebu.

PREGINET also continued supporting telemedicine in the Philippines. The Veterans Memorial Medical Center (VMMC) became the newest partner of PREGINET after the two PREGINET-assisted telemedicine sessions in 2011 to achieve its physical connection. After connecting to PREGINET, the VMMC and Philippine Children's Medical Center conducted a knowledge sharing on pediatric eye examination to provide training for VMMC residents who do not normally see children patients yet undergo into a rotation in a children's hospital. Moreover, PREGINET join conferences and workshops to stay abreast of new technologies on telemedicine. On 14-15 December 2012, it participated in the 6th Asia Telemedicine Symposium in Fukuoka, Japan. Sais symposium provided network managers knowledge not only on Digital Video Transport System, but also on new technologies on telemedicine that have better user interfaces and quality.

With its expertise and technical know-how, the PREGINET Team was tapped by different agencies to provide technical assistance in videoconferencing, live streaming and mirroring solutions. Among these are:

- Mirror website for the University of the Philippines College Admission Test results on 18 January 2012;
- The DOST-ICTO's participation in "ASEAN ICT Masterplan 2015 Forum", via videoconferencing, on 15 February 2012;

- The Department of Foreign Affairs and Philippine Drug Enforcement Agency's Philippines-Mexico Cooperation Committee on Narcotics Trafficking, Drug Abuse and Related Offenses on March 27, 2012.

- The DOST's participation in the joint bureau meeting between the United Nations Economic and Social Council's Bureau and Chairs functional commiss using PREGINET's videoconferencing f on 02 may 2012; an

- Live streaming of th DOST-SEI's Venus transit observation f 02 to 07 June 2012.

In terms of local partners, 33 institutions availed of the PRI connectivity and services.

Domain Name System (DNS) Administration

ASTI has been continuously handling the administration and maintenance of the .gov.ph domain. As of December 2012, a total of 2,041 active domains of various government institutions were maintained.

In order to apply for new .gov.ph domain or to request for modification and deactivation of existing .gov.ph domain, any government agency can access the .gov.ph Domain Registry site. Around 3,862 online tran were processed in 2012. Of t transactions, 518 were applic for new .gov.ph domain name approved while 211 were disa Data also showed that 690 d were requested to be modifie and 160 were deactivated. Se requests for login information consultations from the .gov.p subscribers were also attend the ASTI .gov.ph administrato

Training Services

The DOST-ASTI conducted 13 trainings for 2012. A total of 568 participants were trained, 70% of which are from the government sector, 17% from the academe and 13% from private organizations. Some trainings conducted were in partnership with GIA -funded projects in ASTI such as Grid Computing & AGROMET project. Collaborations with DOST Regional Office No. VII, Central Visayas Information Sharing Network (CVISNET), and University of the Philippines -Cebu Campus and the Asia Pacific Network Information Centre (APNIC) were also pursued to promote IPv6 technology in the Philippines.

ASTI's training unit annual gross income for the year decreased by 50.72%, from Php2,205,788.6 year to Php1,118,825.00 for 2 Major activity conducted for 2 the staging of the IPv6 Unleas the 2nd Philippine IPv6 Confe and Training workshop held ir City from April 23-27, 2012 wh participated by local and inter speakers from different organ including the DOST Regional Office No. VII, Asia Pacific Net Information Centre (APNIC), In and Community Network-Nati Advanced IPv6 Centre of Exc (Nav6), Technology Departme Internet Multifeed (Japan);, NA University of Sains Malaysia, U of he Philippines (UP)- Dilima Campus, and Infoweapons-C

Based on the summary of evaluations (see table 3), the trainings conducted achieved an over-all rating of 4.12, equivalent to a "Very Satisfactory" rating, which is a good indication that the ASTI trainings provide quality, affordable and up-to-date trainings to its clients.

By 2013, the group expects to increase its revenue through project collaborations and partnerships with the academe and government sectors. Moreover, ASTI trainings will also be part of the Interactive Government Philippine (iGovPhil) project nationwide roll-out on the use of standard government website templates.

Table 1. Summary of training activities conducted in 2012

Training	Date Conducted	Venue	No. of Participants	Paid / Sponsored by
Advance Training on File Sharing	Jan. 16-18, 2012	NAMRIA, Fort Bonifacio, Taguig City	20	Philippine Geoportal: One Nation One Map Project
Joomla! CMS for Beginners Training	Jan.18-20, 2012	SEAMEO INNOTECH, Commonwealth Ave., Diliman, Quezon City	11	SEAMEO INNOTECH
Joomla! CMS training	March 19-23, 2012	DOST Regional Office No. VI, Magsaysay Village, la Paz, Iloilo City	17	Various Visayas & Mindanao- based LGUs and State Universities
IPv6 Unleashed 2012: The 2nd Philippine IPv6 Conference	April 23, 2012	Harolds Hotel, Cebu City	61	Various Organizations (National Event)
IPv6 Unleashed 2012: IPv6 with Network Resource Management training Workshop	April 24-27, 2012	University of the Philippines Cebu College, Lahug, Cebu City	40	Various Organizations (National Event)
Network Upgrade Compatibility (UMTS) training	May 11, 2012	ASTI Training Room	27	FOC-- facilitated by Rohde and Schwarz (Philippines), Inc.
Word 0.4 Launch	June 6, 2012	ASTI Training Room	27	Sponsored by DOST-ICTO
PHP/MySQL for Beginners	June 20-22, 2012	ASTI Computer Lab	19	Various personnel from Gov't/Academe/private sectors
PHP/MySQL for Developers using Yii Framework training	June 25-29, 2012	ASTI Computer Lab	16	Various personnel from Gov't/Academe/private sectors
Technical training on VoIP/Asterisk PBX	Sept. 25-28, 2012	ASTI Computer Lab	13	Various personnel from Gov't/Academe/private sectors
International Conference on Disaster	Sept. 18, 2012	Marriott Hotel, Pasay City	45	Overall event coordination was organized by DOST-ITCU
Linux Shell Scripting and Ubuntu Administration	Oct. 1-5, 2012	Computer Laboratory	22	Various personnel from Gov't/Academe/private sectors
GIS Orientation Seminar	October 29, 2012	ASTI Training Room	14	iGov project (organized by Grid Team)

Training	Date Conducted	Venue	No. of Participants	Paid / Sponsor
Hands-on Training on the Installation of Agromet Station	November 6-7, 2012	National Soil and Water Resources R&D Center- Bureau of Soils and Water Management, San Ildefonso, Bulacan	16	Establishment o Meteorological in Highly Vulner Agricultural Are Tool for Climate Adaptation and Development of Early Warning S (AGROMET) Pro
Joomla! CMS Training for Government Personnel	November 19-23, 2012	Computer Laboratory	17	Various personr Gov't/Academe
Hands-on Training on the Installation of Agromet Station	November 22-23, 2012	Inland Resort, Sto. Tomas, Davao del Norte	14	Establishment o Meteorological in Highly Vulnera Agricultural Area Tool for Climate Adaptation and Development of Early Warning S (AGROMET) Pro
Hands-on Training on the Installation of Agromet Station	November 28-29, 2012	Gabi, Ubay, Bohol	22	Establishment o Meteorological in Highly Vulnera Agricultural Area Tool for Climate Adaptation and Development of Early Warning Sy (AGROMET) Pro
Hands-on Training on the Installation of Agromet Station	December 6-7, 2012	Naic, Cavite	14	Establishment o Meteorological in Highly Vulnera Agricultural Area Tool for Climate Adaptation and i Development of Early Warning Sy (AGROMET) Proj
Total			**415**	

Table 2. Distribution of participants according to sector

Government Sector	400
Academe	94
Private	74
Total	**568**

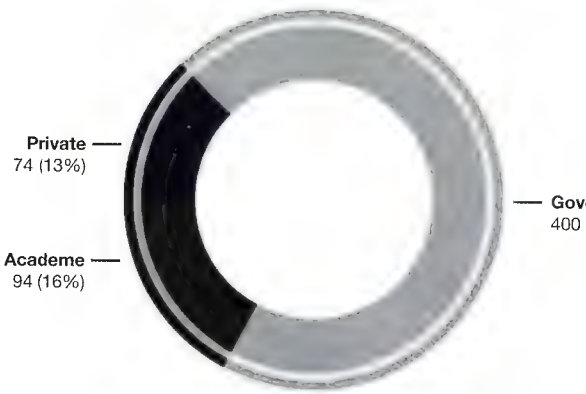


Figure 1. Distribution of participants according to sector

Table 3. Summary of training evaluations (excluding the IPv6 Conference)

Legend: 5.0 Very Satisfactory; 4.54-4.37; Satisfactory; 2.70-3.53; Unsatisfactory: 1.84-2.69; Needs Improvement: 1.0-1.83

Criteria	Needs Improvement	Unsatisfactory	Satisfactory	Very Satisfactory	Excellent
[illegible]	-	-	-	4.21	-
[illegible]		-	-	4.07	-
[illegible]		-	-	4.12	-
[illegible]		-	-	4.05	-
[illegible]		-	-	4.24	-
Overall Rating				**4.12**	

Table 4. Summary of income generated and trainings conducted from 201 to 2013

Year	No. of Trainings	Annual Generated Gross Income (PhP)
2010	12	977,762.55
2011	19	2,205,788.60
2012	**13**	1,118,825.00

Foreign & Local Linkages

The DOST-ASTI continues to vitalize its current linkages with its partner institutions and build additional partnerships through collaborative R&D activities and projects w following consortia, institutio organizations.

Foreign Linkages

Ministry of Agriculture, Forestry and Fisheries Information Network (MAFFIN), Japan

The MAFFIN, which operates in cooperation with the APAN, puts up online hosting to various agriculture, forestry and fishery organizations in different countries.

The DOST-ASTI has served as the direct termination point of the Japan-PH MAFFIN/APAN link in the Philippines as early as 2004. With said link, many research and education endeavors have been conducted, including access to critical data for disaster and typhoon tracking and e-Learning initia conducted between the Phili and international universities Philippine participation in int conferences, fora, symposia workshops via videoconferer well as, the establishment of Grid facilities have been achi because of said link.

The MAFFIN continues to pro financial support for the sust of country's link to APAN. At the link is at 155Mbps and th ASTI is looking forward to lin increase in capacity, to facilit collaborative activities and ha more content.

Asia-Pacific Advanced Network (APAN)

The APAN is a nonprofit international research and education network established in 03 June 1997 aimed at promoting global collaboration, as well as, developments and advances in network-based applications and services among the Asia Pacific region. APAN annually holds workshops, meetings, conferences and the likes among its members in order to meet their objectives. As a primary member of the APAN, the DOST-ASTI continuously supports its activities.

On 13-17 February 2012, the DOST-ASTI participated in the 33rd APAN Meeting held at the Empress Convention Centre in Chiang Thailand. It was a five (5)-day mainly for discussions of net and application technologies well as, case studies of adva networking in the following ar 1) Network Technology; 2) Na Resources; and 3) Applicatio representative from PREGINE the DOST-ASTI attended seve network technology meetings include: a) Global Collaborati Advanced Technology Deplo c) Performance Network; d) N Infrastructure; e) IPv6 Technic Working Group Meeting; and Medical Working Group Meet

Moreover, the Agency sent th representatives for the 34th A Meeting held in Colombo, Sri on 25-29 August 2012. A Net

Research Workshop 2012, part of 34th APAN Meeting, served as a venue for researchers and technical staff from Asia Pacific for information and knowledge exchange. Learnings gathered from the event have been contributing in the advancement of PREGINET's applications, management and operation.

Keio University, Japan

DOST-ASTI's collaboration with the Keio University started in 1998, when the Agency participated in the Asian Internet Interconnection Initiaives (AI3). The AI3 is a foreign research consortium that aims to develop progressive Internet technologies such as IPv6, multimedia communication methods and modern Internet applications. It helps in the development of knowledge-based information infrastructure in Asian region.

The DOST-ASTI has been participating also, in University's School-on-the-Internet (SOI) Asia Project. The SOI Asia Project seeks to contribute to the development of higher education in Asian countries by:

- Conducting R&D of necessary technology for human resource development in Asia;
- Performing field experiments to make new educational methodology not only for universities in Japan, but also for educational institutions in Asia; and
- Utilizing satellite-based Internet to establish less expensive, easy-to-deploy and more feasible Internet environments.

Due to its dynamic participation in AI3 and SOI Asia, the DOST-ASTI became a member of the COllaboration for Network eNabled Education Culture, Technology and science (CONNECT) Asia. CONNECT Asia is a UNESCO initiative, which actively contributes to the development and improvement of research and education in Asia and Pacific.

Trans Eurasia Information Network 3 (TEIN3)

TEIN3 is the third generation of TEIN network that operates at speeds up to 2.5Gbps and connects Asia Pacific countries. TEIN3 was launched in the Philippines on 25 February 2009 during the APRICOT 2009 Manila.

The DOST-ASTI, through the PREGINET, has been participating in the TEIN initiative since 2004. The PREGINET joined in the Advanced Routing BGP IPv4/IPv6 Workshop at Shinawatra University at Bangkok, Thailand from 30 July 2012 to 03 August 2012. Said workshop focused on enhancing technical staff's knowledge and skills on IGP and BGP IPv4/IPv6 which are being used for configuration and operation of large scale networks by the discussion and demonstration of the following:

- Routing Protocols (BGP, ISIS, OSPF, IPv6);
- ISP Network Design and Operations Best Practices;
- IPv6 Background and Standards;
- IPv6 Addressing; and
- IPv6 De`ployment.

On 13-17 August 2012, TEIN3, in coordination with Asian Institute Technology (AIT) organized another workshop to provide knowledge on designing, implementation, optimization and maintenance o networks, as well as, on IP/MPL core routing technologies. Said event was also participated in, PREGINET..

Asia Pacific Network Information Centre (APNIC)

The APNIC is an open, membership-based and nonprofit organization established by the Asia Pacific Networking Group in 1992. It is the Regional Internet Registry for the Asia Pacific region. The APNIC ensures the fair distribution and responsible management of IP addresses and related courses, which are critical for the stable and reliable operation of the global Internet. It is also active in developing Internet infrastructure throughout the region by collaborating with other regional and international organizations, providing training and education services and supporting technical activities like root server deployments. On 27 February 2009, the DOST-ASTI started its partnership with the APNIC and continues its collaboration by participating in activities such as attending seminars and conferences, exchanging of information, infrastructure development and business in A Pacific region, promoting educa and training, training delivery, a others..

The DOST-ASTI's partnership w the APNIC started on 27 Febru 2009. The DOST-ASTI strength its collaboration with the APNIC joining its activities in promotin education and training, infrastru development and business in A Pacific region, training delivery, exchange of information, semin and conferences. This year, the DOST-ASTI participated in the Pacific IPv6 Task Force Meetin August 2011. Said meeting high reports on the IPv6 Day experi supporting the IPv6 uptake and transition in several countries, including India, Japan, Korea, Philippines, among others.

Japan Aerospace Exploration Agency (JAXA)

The JAXA is Japan's administrative institution responsible in performing research, development and technology utilization in the aerospace field. The Institution aims to develop and sustain the field of aerospace technology to contribute to the security of mankind. Its activities include aviation programs, basic technology research, human sp activities, satellites and space satellite utilization, space scien research and space transporta system. The DOST-ASTI, in cooperation with the JAXA, init a research project titled, "Multi Experiment using the Wideban InterNetworking Engineering a Demonstration Satellite (WINDS The WINDS helps in the facilita e-Learning and disaster manag

PREGINET

- Apart from foreign linkages that the PREGINET has, below are local partners, which renewed their PREGINET connectivity and services:

    1. Connectivity – Court of Appeals-Manila, Court of Appeals-Cebu, Court of Appeals-Cagayan de Oro, DOST-PAGASA Head Office, DOST-PAGASA Cebu, Philippine Heart Center, UP Cebu, UP Los Baños, UP Open University-Los Baños, National Computer Center and Veterans Memorial Medical Center (new partner)

    2. Services – Presidential Anti-Organized Crime Commission, Office of the Vice President, Presidential Broadcast Staff Radio Television Malacañang, Partido Development Authority, Cooperative Development Authority, Public-Private Partnership Center of the Philippines, Industrial Technology Development Institute, Court of Appeals, Office of the Provincial Agriculturist, Provincial Government of Camiguin, LGU-Kiangan, Ifugao, LGU-Sta. Maria, Laguna, LGU-Mambajao, Camiguin, Metro Roxas Water District, Philippine Science High School, UP Manila National Telehealth Center, eTESDA, Department of Public Works and Highways-ARMM, Department of Labor and Employment, Bureau of Communication and Services and DOST-Technology Resource Center.

Organizational Learning & Development

Knowledge Management (KM)

Since the implementation of Knowledge Management (KM) in the DOST-ASTI, several activities have been conducted on regular basis as part of Agency's initiatives for organizational development and institutional growth. Apart from the regular technical knowledge dissemination and technology transfer activities, the KMD provided necessary support to its staff by strengthening knowledge capital, as well as, expanding social capital and external networks. This year, the following endeavors were put into realization:

Organizational Development and Knowledge Capital

- One (1) Full KM Audit under a new research format with a total of 126 respondents, garnering suggestions from an increasing number of Knowledge Sharing sessions, and useing available technology within the Agency such as videoconferencing
- Knowledge sharing activities with a total of 17 sessions and 259 participants, and earning a very satisfactory rating for both the speakers and the sessions
- A total of 36 TechIntel articles uploaded with topics ranging from ICT, marketing and e-learning
- Four (4) sessions of Communities of Practice (CoP) attended by a total of 32 participants and the establishment of a new CoP, the Technology Transfer group
- Case studies on the following GIA projects:
- Tests, Analyses and Calibration Information System (TACIS)
- eDOST information system
- Knowledge Networking Towards Enterprising Agricultural Communities (K-Agrinet)
- Flood Monitoring system for Metropolitan Manila Development Authority
- ICT for the Environment
- Wood Moisture Meter
- Boosting Grid Computing Using Reconfigurable Hard Technology (HPRC)
- Interactive Science and Math courseware for Elementary Students
- Philippine Research Education and Government Information Network
- 10. Development of the National Biosafety Clearing House Information System (BCH Pilipinas)
- Department of Science and Technology- Philippine Eco Zone Authority Open Techn Business Incubator (OPEN

Social Capital and Knowledg Networks

- National Contact Point Act

Since the formal designatio the DOST-ASTI as a Nation Contact Point (NCP) organ of the European Commissi (EC) for ICT in the Philippin the Agency has joined the Ideal-ist Network and Idea 2014 project and has since then become a beneficiary in one of the project's wo package, "Support to NCP

Ideal-ist is an international partner search network, w more than 85,000 contact with the international coop strategy of the EC. The ob of the Ideal-ist 2014 projec reinforce the network of N for ICT, under the Framew 7 (FP7), by promoting furth

Development 2012
(e-Disaster session)

- Participation in drafting the following proposals:

  a. Low-cost and innovative ICT-based solutions for disaster management reinforcing European-Association of Southeast Asian Nation (EU-ASEAN) strategic partnership (DISRUPTER); and

  b. Establishing Communities of Practice Networks for ICT Diffusion on IPv6 Migration and adaptation in the Philippines (under the Information Society Innovation Fund).

- Establishment of Knowledge Network with Various Local and Foreign Organizations

  A local learning event was conducted in Cebu City, in cooperation with the Central Visayas Information Sharing Network (CVISNET). With the participation in international initiatives, the following networks were established:

  - Agency for the Promotion of European Research (Rome)
  - Regional Center for Information Society Development (Bulgaria)
  - The Finnish Funding Agency for Technology and Innovation (Finland)
  - Regional Innovative Technologies Academy (Azerbaijan Republic)
  - Information Society and Media Directorate-General, European Commission, (Belgium)
  - Enterprise Ireland (Ireland)
  - Ministry of Science and Technological Development (Republic of Serbia)
  - Technology Strategy Board (United Kingdom)
  - Uganda National Council for Science and Technology (Uganda)
  - Loughborough University (United Kingdom)
  - Malta Council for Science and Technology
  - Technical University of Sofia (Bulgaria)
  - VTT Technical Research Center of Finland
  - Belarusian Institute of System Analysis and Information Support of Scientific Technical Sphere
  - Foreign Affairs and International Trade (Canada)
  - Malta College of Arts, Science, and Technology
  - Walloon Business Federation (Belgium)
  - Ahref Foundation(Italy)
  - Theodore Puskas Foundation (Hungary)
  - Aristotelle University of Thessalonki (Greece)
  - Health Protection Agency (United Kingdom)
  - Japan International Cooperation Agancy
  - Information Society Innovation Fund (ISIF)
  - National ICT Development Authority
  - University of Sains Malaysia

Management Information Systems

In 2012, the Management Information Systems (MIS) Unit focused its efforts on the customization of the ASTI Information System for the Department of Energy and the National Security Council. Detai of accomplishments of these tw projects are presented in sectio 1: Research and Development c report.

Process Development

Quality Management System (QMS) Certified to ISO 9001:2008

SATISFACTORY. - This year, the overall measurement of customer satisfaction on ASTI services and products, rates "satisfactory." Evidently, the Agency is keeping with attaining its corporate objective that is focused on meeting or exceeding customer requirements and satisfaction. However, it has come to the attention of the Top Management that low turnout of customer feedback has become a persistent finding through the years. This concern has driven the Agency to proactively strategize ways and means to boost efforts in collecting feedback from clients and partners. The mechanism towards increasing satisfaction level after all, is done when customer requirements are understood and addressed.

IGNITING THE MINDS. - Breeding forward thinkers, the ISO Technical Working Group (TWG) sees to it that its members and all ASTI staff are always updated on ISO 9001:2008 and other standards relevant to Agency operations. The TWG allows Agency staff, clients and partners recognize the status of Agency's compliance to standards and guidelines, and realize the value of Quality Management System (QMS) that is put in place, in the delivery of R&D services to the people. Thus, to enrich minds and broaden the appreciation on QMS, both of which are critical to capacity development of the TWG, staff were sent to attend and participate in the following activities:

External Seminars / Trainings / Workshops

- 14th Philippine Quality Award Forum
- 17 April 2012, PICC
- Participated in by the QMR
- the Agency Document Cus
- Internal Control Structure for Agency Personnel
- 17-20 July 2012, COA Professional Development
- Participated in by one (1) member of the ISO TWG
- Internal Quality Audit
- 22-23 August 2012, DTI-PT
- Participated in by the Internal Audit Head and the Audit Team Leader
- ISO 9001:2008 QMS Root Analysis and Corrective Ac
- 29-30 August 2012, DTI-PT
- Participated in by one (1) member of the ISO TWG
- How to Become an Effectiv 9001:2008 Document Con
- 14 September 2012, DTI-P
- Participated in by two (2) A Document Custodian and Division Document Custod
- INTERNAL ECHO SEMINARS/K-SHARING
- Refresher on QMS and ISO 9001:2008 for Project Managers and Team Leade
- 27 March 2012, 1:30 PM – PM, ASTI Conference Roo
- 24 Participants
- ISO 9001:2008 QMS 101: Understanding and Implementing its Requirem for ASTI Newbies
- 17 August 2012, 9:30 AM – AM, ASTI Conference Roo
- 21 Participants

- Internal Control Structure for Agency Personnel (especially for FAD staff)
- 24 August 2012, 1:30 PM – 3:30 PM, ASTI Conference Room
- 9 Participants
- Internal Quality Audit
- 08 November 2012, 9:00 AM to 3:30 PM, ASTI Conference Room
- 12 Participants
- ISO 9001:2008 QMS Root Cause Analysis and Corrective Action and How to Become and
- Effective ISO 9001:2008 Document Controller
- 09 November 2012, 9:00 AM to 3:30 PM, ASTI Conference Room
- 16 Participants

LAPSES ADDRESSED AND CLOSED. - The scope of transfer audit conducted this year, included the Top Management, the Quality Management Representative, internal QMS audit/corrective and preventive action, document and records control, human resources, training, supply and property (procurement), billing and collections, maintenance, Research and Development Division, Knowledge Management Division, Computer Software Division and Solutions and Services Engineering Division. One notable result of the audit is "zero-noncoformity (NC)" findings. ASTI, however, received 18 "Obervations" (areas which, if not properly and immediately addressed, could become potential NCs) and eight (8) "Hints" (areas with room for improvement).

VIGOROUS IMPLEMENTORS. - Priceless are the efforts of all ASTI staff, who have continued to cooperate in the implementation ISO 9001:2008. It is not surprising how this very young generation has shown its susceptibility to new learnings, particularly, on inernal controls system, documantation and records management, auditing, as well as, organizational growth and development. Needless to say, it is a major factor that the Top Management, composed of pillars of ASTI's working QMS, has never failed to provide its 100% support.

ECONOMICAL, EFFICIENT, EFFECTIVE, ETHICAL. - At the threshold of its silver years, ASTI has boldly shown the true embodiment of the four (4) Es, which have always been deemed critical in sustaining a strong, accurate and reliable internal control system of the organization. "Economical." "Efficient." "Effective." These first three (3) Es, built-in along product development and realization, have transformed ASTI's limited resources into completion of more than 90% of Agency's Major Final Outputs. A primary key, indeed, to such accomplishments, is "Ethicality," mirrored by the overall attitude of ASTI officials and staff towards work, co-workers, customers and the organizational goals.

RECERTIFIED! - Year 2012 definitely marks another milestone for ASTI's QMS. For successfully passing the transfer audit, ASTI has been conferred a new certification to ISO 9001:2008 valid for another three (3) years (18 May 2012-17 May 2015). The certification was issued by the Agency's new certifying body, which is accredited by the DTI-Philippine Accreditation Office, the TUV SUD. In the span of three (3) years TUV SUD would be auditing and monitoring ASTI's compliance to ISO 9001:2008 and would be hand-in-hand with the Top Management for the Agency to progress towards greater quality service. On its 25th year, more confident than ever, ASTI has stood as one of the leading Agencies implementing the Government-wide Quality Management Program.

FINANCIAL & HUMAN RESOURCES MANAGEMENT

Financial Resource

In CY 2012, the Agency has generated a total funding of P408,247,671.21 out of which, about 81% or P329,857,178.96 was utilized as of December 31, 2012. Breakdown as follows:

Table 1. Utilization Summary for 2012 (in Philippine Peso)

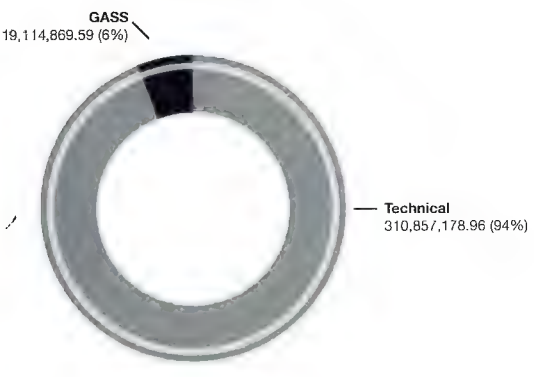
Particulars	Allotment	Obligations	Balances	% Utilization
A. Current Year's Allotment				
1. Regular Appropriations	**78,663,000.00**	**62,982,625.79**	**15,680,374.21**	80%
2. Automatic Appropriations (RLIP)	**2,693,000.00**	**2,668,798.08**	**24,201.92**	99%
3. Special Purpose Fund	**63,216,792.00**	**56,016,154.87**	**7,200,637.13**	88.61%
MPBF	**4,470,000.00**	**4,438,500.00**	**31,500.00**	99%
EGOV Fund	**313,893,519.00**	**253,649,428.88**	**60,244,090.12**	81%
Sub-Total, Current	**399,719,519.00**	**323,739,352.75**	**75,980,166.25**	81%
B. Prior Year's Allotments				
1. Regular Appropriations	3,029,500.00	619,174.00	2,410,326.00	20%
2. ASA	5,498,652.21	5,498,652.21	-	100%
Sub-Total, Continuing	8,528,152.21	**6,117,826.21**	**2,410,326.00**	72%
Grand Totals	**408,247,671.21**	**329,857,178.96**	**78,390,492.25**	81%

The low utilization for Regular Appropriations was primarily due to failed biddings on capital outlays, as well as, the non-utilization of the Grant-in-Aid project originally proposed to the DOST, but directly downloaded by the DBM to the Agency.

Out of the total allotments utilized by the Agency, more than 94% was used as funding support for technical activities, while the remaining 6% represents the expenses incurred for the General and Administrative Support Services (GASS). Breakdown below:

Table 2. Obligations by Activity Type

Activity Type	Obligations	Share
GASS	19,114,869.59	6%
Technical	310,742,309.37	94%
Total	**329,857,178.96**	**100%**



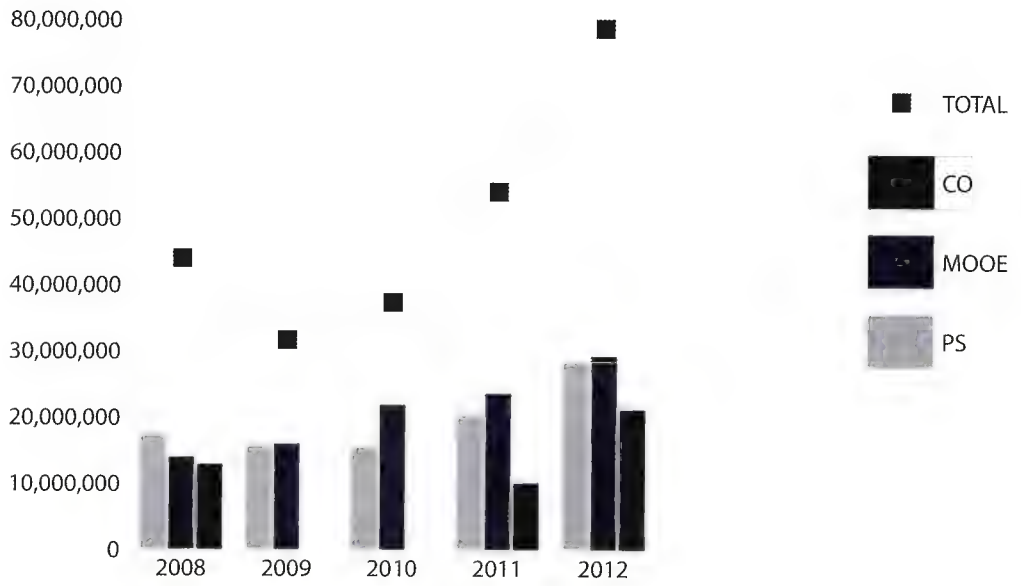
Breakdown of Expenses, by Activity Type

Below is the 5-year comparative summary of annual appropriations for the institute:

Table 3. Comparative Summary of Annual Appropriations

Fiscal Year	PS	MOOE	CO	TOTAL
2008	17,177,000.00	13,893,000.00	12,804,000.00	43,874,000.00
2009	15,684,000.00	15,896,000.00	-	31,580,000.00
2010	15,492,000.00	21,795,000.00	-	37,287,000.00
2011	20,383,000.00	23,549,000.00	10,065,000.00	53,997,000.00
2012	28,331,000.00	29,187,000.00	21,145,000.00	78,663,000.00

Noticeably, the increase in PS budget was due to the filling up of all authorized plantilla positions of the Agency, augmented with five (5) additional plantilla positions.



Human Resource

Activities

The Agency organizes several activities that are geared towards development of team-work, camaraderie among its employees and promotion of their health and wellness. Below are photos showing some of the HR activities held in 2012:

Scholarships

Part of Agency's efforts to improve the capabilities of its manpower is by sending them back to school. In 2012, Engr. Alvin C. Retamar completed a Master's Degree in Business Administration from the Graduate School of the International University of Japan. The course was undertaken by Engr. Retamar with assistance from the Japanese Government under its Grant Aid for Human Resource Development. Aside from him, six (6) other employees were also able to secure scholarship grants for graduate studies. The scholars under the Department of Science and Technology Human Resource Development Program include:

Table 1. Scholarships granted to DOST-ASTI employees

Name	Course	School
Reynaldo Joseph A. Callao, Jr.	Master of Public Management Technology-based Enterprise Development	Ateneo de Manila University
Jayson C. Hernandez	Master of Public Administration	Polytechnic University of the Philippine
Emily R. Pagador	Master of Public Administration	Polytechnic University of the Philippine
Mitz Ann N. Montañez	Master of Public Administration	Polytechnic University of the Philippine
Pinky R. Manio	Master of Public Administration	Polytechnic University of the Philippine
Mylene N. Monton	Master of Industrial Relations	University of the Philippines

Training. To equip DOST-ASTI employees with the necessary skills and competencies in the performance o their regular and designated tasks, the following personnel were sent to various trainings:

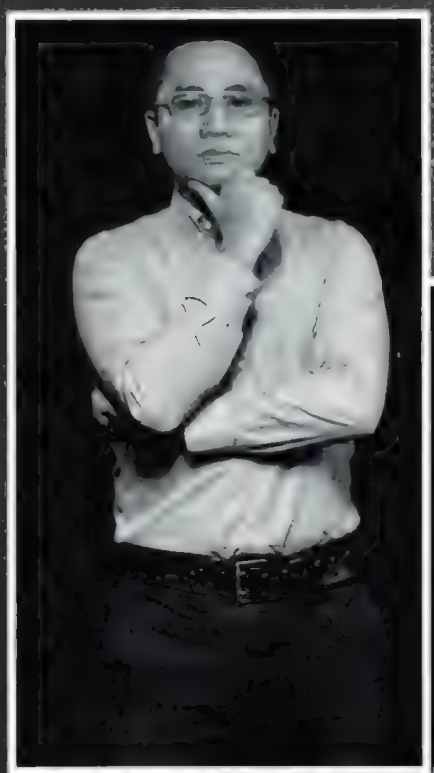
Table 2. Trainings attended by DOST-ASTI employees

Title	Participants	Date	Venue
Conference/Seminar on "GACPA: Sustaining Ethics and Excellence in Managing Government Resources"	Atty. Carmencita M. Echano, Mary Drol Dee Q. Gilla, Karen L. Felix	02 August 2012	Tejeros Hall, AFP Commissioned Officers Club, Camp General Emil Aguinaldo, Quezon City
Internal Control Structure	Mary Drol Dee Q. Gilla	17-20 July 2012	Professional Development Center, Commission on Audit, Commonwealth Avenue, Quezon City
PCB Design Engine Workshop	Nypho P. Pareño, Jay Randolf S. Ratunil, Jalaludin A. Umpa, Jericho C. Capito, George A. Mesina	27 June 2012	Tech Portal, UP-AyalaLand Technohub, Commonwealth Aven Diliman, Quezon City
ROOTCON6	Rene C. Mendoza, Emmanuel P. Balintec, Rod James Bio, Jonh Robert T. Mendoza, Emetero D. Casera, Jr.	6-9 September 2012	Cebu Parklane, International Hote Cebu City
Wi-Max and GPON Infrastructure	Rod James U. Bio, Mark Henry N. Quilala	26-28 June 2012	The Armed Forces of the Philippir Golf Club, Gate 3, Camp Emilio Aguinaldo, Quezon City
Advanced Statistical Analysis for Research and Development	Elmer Paremo	18-21 June 2012	DOST Executive Lounge, DOST Compound, General Santos Aven Bicutan, Taguig City
Statistical Analysis for Research and Development	Maria Christina Manuel, Elmer Peramo	28-31 May 2012	DOST-Executive Lounge, DOST Compound, General Santos Aven Bicutan, Taguig City
Broadband Global Area Network Refresher Training - Luzon Cluster (Batch 1&2)	Mark Henry N. Quilala, Alvin M. de Gracia	17-21 May 2012	DOST-ASTI
Statistical Analysis for Research and Development	Mitz Ann N. Montañez	28-31 May 2012	DOST Executive Lounge, DOST Compound, General Santos Aven Bicutan, Taguig City
Seminar on Intellectual Property Licensing: A Tool for Expanding Your Business	Pedrito B. Mangahas, Maria Cristina N. Manuel	20 April 2012	DOST Executive Lounge, DOST Compound, General Santos Aven Bicutan, Taguig City
Training/Workshop on Government Manpower Information System	Mini May Markie Medel, Mylene Monton	11-13 April 2012	Hotel Veniz, Baguio City

Title	Participants	Date	Venue
Oracle Training	Mini May Markie Medel, Girlie O. Dimanarig, Roxanne S. Aviñante	27 Feb - 02 March 2012	NCC, C.P. Garcia Avenue, Diliman, Quezon City
DTI-PTTC Quality and Productivity Course	Rusnell A. Espinoza, Karen. L. Felix, Mary Drol Dee Q. Glila, Mitz Ann N. Montañez	August and September	
Conference Workshop on Building a Community of Practice on Climate Change Actions	Rene M. Mendoza	24-27 September 2012	G Hotel by Waterfront, Roxas Boulevard, Manila
DB2 10 for Linux, UNIX and Windows Bootcamp	Girlie O. Dimanarig, Roxanne S. Aviñante, Mini May Markie M. Sandoval, Paul John M. Serrano, Michelle P. Neverida	26-29 November 2012	UP-Ayala Technohub, Diliman, Quezon City

Investment in Agency's human resources will always be a major focus of the DOST ASTI as it believes in delivering more quality products and services to the public by raising competent and highly-skilled manpower.

2012 ASTI Officials



(From left to right)
Alvin E. Retamar *(Chief, Systems and Services Engineering Division)*
Atty. Carmencita M. Echano *(Chief, Finance and Administrative Division)*
Denis F. Villorente *(Director)*
Peter Antonio B. Banzon *(Chief, Research and Development Division)*
Joanna G. Syjuco *(Chief, Computer Software Division)*
Rene C. Mendoza *(Chief, Knowledge Management Division)*

Organizational Structure

The organizational structure of ASTI is composed of the Office of the Director (OD), Finance and Administrative Division (FAD), and four (4) technical divisions namely:

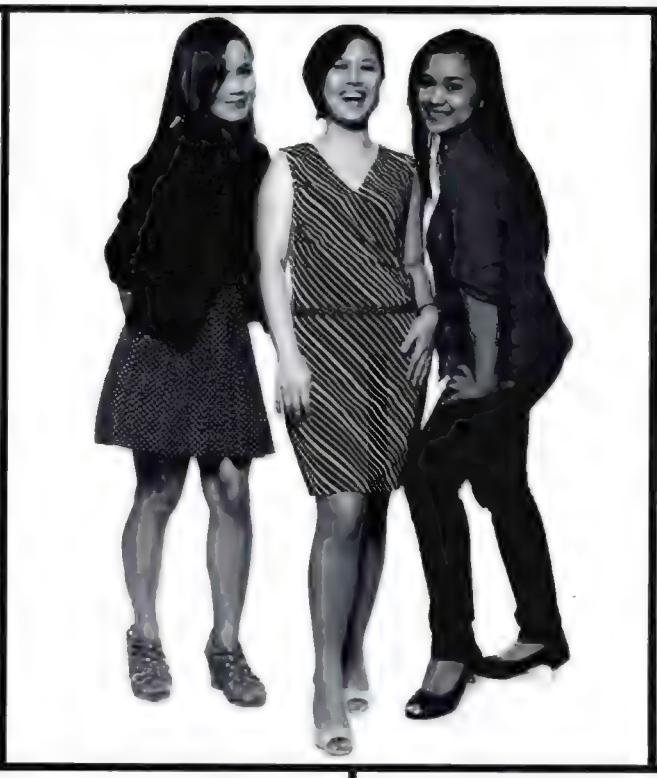
- Research and Development Division (RDD),
- Solutions and Services Engineering Division (SSED),
- Computer Software Division (CSD), and
- Knowledge Management Division (KMD).

Office of the Director

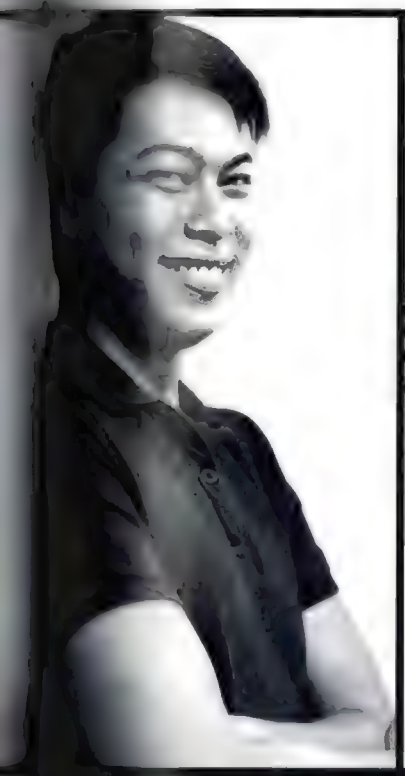
OD

Office of the Director (OD) oversees the overall welfare of Agency as it sets Agency's strategic direction, formulates policies, and ensures implementation to attain goals objectives. This group is also responsible for the planning monitoring of research programs/projects and other of the agency, setting of performance indicators and evaluation of agency performance based on the formulated measures. Since the human resource development unit under OD, the same oversees the development of competencies and expansion of capabilities of the agency.

Activities entrusted to the OD include establishment maintaining partnerships and linkages with the DOST external organizations on R&D and technology transfer etc, as well as, scouting for possible funding sources for Agency's different programs.



FAD



Finance and Administrative Division

Finance and Administrative Division (FAD) provides support and the necessary services for the ...e of the Agency and its staff. It advises and assists the Director on budgetary, financial and ...pment matters. It also provides the Agency with economical, efficient and effective services ...g to personnel, supplies, equipment, collections, disbursement, security and custodial work.

Research and Development Division

RDD

The Research and Development Division (RDD) conducts strategic R&D in ICT and Electronics taking direction from the national S&T Plan, as well as, ICT and Electronics industry development roadmaps. The Divisin is divided into three (3) sections, namely: Network Research, Computing Research, and Microelectronics Research.

The Network Research Section implements R&D projects in the fields of advanced networking and wireless technologies that are necessary for the design and implementation of innovative advanced networking products/services and wireless communications systems.

The Computing Research Section focuses on projects involving various computing technologies such as Open Source and Grid Computing which are significant in the development of software and firmware products.

The Microelectronics Research Section prioritizes research activities that would establish the design foundation and know-how, which are vital to country's entry into the local and global market for integrated circuits and embedded products and solutions.for possible funding sources for Agency's different programs.

Solutions and Services Engineering Division

SSED

olutions and Services
ering Division (SSED) is
y's center for engineering and
work. It handles, supports
markets various solutions and
s. The Division is composed of
mbedded Systems Group (ESG)
the PREGINET.

The ESG is responsible for developing holistic embedded solutions for clients that incorporate microcontroller-based design, communication, graphical user interface and applications. On the other hand, the PREGINET operates and maintains country's only nationwide research and education network and provides network services such as VoIP, IPv6, videoconferencing and other similar services.

The Computer Software Division (CSD) aims at becoming a premiere software development team providing innovative and quality software systems and applications. It forges and strengthens partnerships with the academe, government and industry by providing effective software solutions, software design and development consultancies, and contract researches. The division consists of six teams focusing on: (1) project management; (2) business analysis; (3) software quality; assurance; (4) systems engineering; (5) new media technologies; and (6) systems security and administration.

CSD

The Project Management Team handles project planning, operati and monitoring to be able to deli the desired results.

Managing software requirement improve the software developm process of the Division and ensure that client requirements are addressed, are the primary responsibilities of the Business Analysis Team.

ftware Quality Assurance
take charge of software
based on the product
set by the division.

tems Engineering Team
of the development
mentation of software
tions and information systems
the conduct of research and
tion of emerging software
ing languages and tools,
tion of consultancies on
design and development.

Computer Software Division

The New Media Technologies Team specializes on the design and development of a wide range of digital applications running on different hardware platforms and operating systems, conduct of research on advanced techniques in developing digital content, and providing consultancy services related to new media technologies.

The Systems Security and Administration Team manages Division's software and network infrastructure and servers, performs system routine checks, and implements security measures.

KMD

The Knowledge Management Di
(`t) is created for the purpose of
increasing and better leveraging
DOST-ASTI's available intellectu
capital and enabling the Agency
continuously improve its perform
through reuse of its intellectual
capital. The Division is composed
of the Knowledge Management
(KM) Unit, Management Informati
Systems (MIS) Unit, Training Unit,
the Library Unit.

The MIS Unit develops and maintains Agency's information systems. It employs KM as a leverage in developing and designing information systems relevant to the organizational process improvement and for Agency use, as well as, its external customers. It also provides support in maintaining DOST-ASTI's computing resources.

The Training Unit organizes, de
and conducts training program
enable proper knowledge shari
transfer of Agency's R&D activit
its internal and external clients

The Library Unit provides acces
collection of resources and mat
relevant to the conduct of rese
and development activities by t
entire Agency.

The KM Unit carries out the following functions: a) Source, mine, synthesize and package knowledge for internal and external use; b) Leverage knowledge to improve organizational performance of the Agency; c) Proactively share knowledge for development impact; and d) Leverage KM as an integrating component for selected technology solutions.

Knowledge Management Division

Annex

MFO Data

Table 1. Technology Transfer Beneficiaries (Commercialized)

BENEFICIARY		Technology/ies Transferred		Period of Engagement		Responsible Agency Staff
Name of Enterprise	Address	Name of Technology	Description	Start	End	Name
Department of Energy	Merritt Road, Fort Bonifacio Makati, Metro Manila	ASTI Infosys	Customization of ASTI Infosys	Q1	Q4	Emily R Pagadu
Office of the Solicitor General	134 Amorsolo St., Legaspi Village, Makati City	ASTI Infosys	Customization of ASTI Infosys	Q1	Q3	Emily R Pagadu
Energy Development Board	38/F One Corporate Centre, Julia Vargas corner Meralco Avenue, Ortigas Center Pasig City	High Performance Computing Technology	Use of ASTI's High Performance Computing Technology	Q1	Q4	Jelina Tetangco
Various students/ Individuals		Digital Multimeter (DMM)	Sale of DMM (FP705) units developed by ASTI/FPRDI and adopted by Alexan Commercial	Q1	Q4	Alexan Commercial
Mr. Vincent Dublado		Bayanihan Linux	Production of a copy of the Bayanihan Linux	Q2	Q2	Pinky R. Manio
National Hydraulic Research Center	College of Eng'g , UP Diliman, Q C.	ARG	Fabrication of ARG	Q3	Q3 (2013)	Ma. Cristina N Manuel
UP Los Baños Foundation, Inc	UP Los Baños, Laguna	Water Level Monitoring System (WLMS)	Fabrication of WLMS	Q3	Q4	Ma Cristina N. Manuel
UP Baguio	Governor Center Road, Baguio City	ARG	Product/technology inquiries	Q4	Q1 (2014)	Maria Cristina N Manuel
DOST VI	Magsaysay Village, La Paz, Iloilo City	WLMS	Fabrication of WLMS	Q4	Q2 (2013)	Ma Cristina N Manuel
Romblon State University	Odiongan, Romblon	Agromet Station	Product/technology inquiries	Q4	Q2 (2014)	Maria Cristina N Manuel
DOST IX	Pettit Barracks, Zamboanga City	AWS	Fabrication of AWS	Q4	Q4	Ma. Cristina N. Manuel
DAR-RFU Region III	City of San Fernando, Pampanga	Agromet Station	Fabrication of Agromet Station	Q4	Q4 (2013)	Ma. Cristina N. Manuel
LGU Sibugay	Prov Capitol Hill Heights, Sibugay, Zamboanga	Automated Rain Gauge (ARG) and AWS	Fabrication of ARG and AWS	Q4	Q4 (2013)	Ma. Cristina N. Manuel

Table 2. Technology Transfer Beneficiaries (Diffusion)

Beneficiary		Technology/ies Diffused		Period of Engagement		Responsible Agency Staff
Name of Enterprise	Address	Name of Technology	Description	Start	End	Name
MMDA	EDSA cor Orense St., Guadalupe, Makati City	CCTV Live Streaming	Product/technology talks on live streaming in the internet	Q1	Q1	May C. Cayaban
Public elementary and high schools in Metro Manila and Laguna		Interactive Courseware Modules in Science and Mathematics	Product/Technology talks and testing	Q1	Q1	Dianne A David
UERMMMC	#64 Aurora Blvd , Doña Imelda, Q.C	PREGINET and its services	Product/technology talks	Q1	Q1	May C. Cayaban
UERMMMC	#64 Aurora Blvd., Doña Imelda, Q C.	DVTS technology	Product/technology talks and demonstration of Telemed using DVTS	Q1	Q1	May C. Cayaban
UPOU	Los Baños, Laguna	PREGINET and its services	Product/technology talks	Q1	Q1	May C. Cayaban

Beneficiary		Technology/ies Diffused		Period of Engagement		Responsible Agency Staff
Name of Enterprise	Address	Name of Technology	Description	Start	End	Name
Various professionals/ students		BL email support/walk ins	Product/technology inquiries	Q1	Q1	Reynaldo Joseph A. Callao, Jr.
Various professionals/ individuals		Bayanihan Linux	Downloading of Bayanihan Linux versions	Q1	Q4	Reynaldo Joseph A Callao, Jr.
Various professionals/ individuals		Interactive Math and Science Courseware Modules	Downloading of Interactive Courseware Module versions	Q1	Q4	Elmer C. Peramo
ABC 5 c/o Ms Elyse Go, the project manager of Interaksyon com, online news portal of TV5	Mandaluyong City, Metro manila	ASTI weather stations	Request info re: flood and water level data collected by ASTI devices	Q2	Q2	Shanta Laura D. Velasquez/Maria Cristina N. Manuel
ARMM	ARMM Regional Governor, ARMM Complex, Cotabato City	PREGINET's webhosting service	Product/technology inquiries	Q2	Q2	May C. Cayaban
Ateneo Graduate School/ Ateneo School of Medicine	Don Eugenio Lopez Sr Medical Complex, Ortigas Avenue, Pasig City	PREGINET connectivity	Product/technology inquiries	Q2	Q2	May C. Cayaban
BIR	Quezon Ave , Q C.	PREGINET and its services	Product/technology talks	Q2	Q2	May C Cayaban
Bureau of Agricultural and Fisheries Products Standards	Vasra, Q C.	PREGINET connectivity	Product/technology inquiries	Q2	Q2	May C. Cayaban
CDA	Quezon Ave., Q.C.	PREGINET's webhosting service	Product/technology inquiries	Q2	Q2	May C. Cayaban
Commission on Appointments	6F PNB Bldg., Diosdado Macapagal Avenue, Pasay City	PREGINET's webhosting service	Product/technology inquiries	Q2	Q2	May C. Cayaban
Dangal ng Bulacan Foundation, Inc ; DOST RO III Bulacan Chamber of Commerce & Industry DOST-TAPI	Hiyas ng Bulacan Convention Center, Malolos City, Bulacan	Embedded technologies: Data Logger WMM AWS ARG	Product/technology talks and demonstration during the Investment forum Featuring Commerciable Technologies from DOST	Q2	Q2	Maria Cristina N. Manuel
Department of Education	Pasig City, Metro Manila	PREGINET connectivity	Product/technology inquiries	Q2	Q2	May C. Cayaban
Fullbright College	Princesa, Palawan	ASTI Technologies, and Trainings	Product/technology talks and demonstration	Q2	Q2	Pinky R. Manio
National Institute of Health	UP Manila	PREGINET's webhosting service	Product/technology inquiries	Q2	Q2	May C. Cayaban
Participants from Telco Companies such as Globe, ETPI, Comclark, DOJ, NCC, ICTO, Telof, NTC		IPv6 Technology	Product and technology presentations and demonstrations during the World IPv6 Launch	Q2	Q2	May C. Cayaban
PEZA	PEZA Building Roxas Boulevard corner San Luis Street Pasay City, Metro Manila	PREGINET and its services	Product/technology talks	Q2	Q2	May C. Cayaban
Philippine Heart Center	East Ave., Q C.	PREGINET and its services	Product/technology talks	Q2	Q2	May C. Cayaban
Philippine Nuclear Research Institute	Commonwealth Ave., Q.C	PREGINET and its services	Product/technology talks	Q2	Q2	May C. Cayaban
PNRI	Commonwealth Ave , Q.C	PREGINET's server collocation services	Product/technology inquiries	Q2	Q2	May C. Cayaban
Presidential Anti-Organized Crime Commission	Camp Crame, Q C.	PREGINET's webhosting service	Product/technology inquiries	Q2	Q2	May C Cayaban
PSHS	Agham Road, Q.C	PREGINET and its services	Product/technology talks	Q2	Q2	May C. Cayaban
CSC	Constitution Hills, Batasang Pambansa Complex, Diliman, Q C.	ASTI-Developed COMEX application	Resource person for the presentation of the ASTI-Developed COMEX application	Q3	Q3	May C. Cayaban

Beneficiary		Technology/ies Diffused		Period of Engagement		Responsible Agency Staff
Name of Enterprise	Address	Name of Technology	Description	Start	End	Name
DA RFU 1, 2, 3, 4a, 4b, 5, 6, 7, 8, 9, 10		ARG/Agromet	Product/technology inquiries	Q3	Q3	Maria Cristina N. Manuel
DFA	Aseana Business Park, Diosdado Macapagal Blvd, Parañaque City, Philippines	PREGINET connectivity upgrade	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
DOST 4A	Jamboree Road, Timugan, Los Baños, Laguna	PREGINET connectivity	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
DOTC	The Columbia Tower Ortigas Avenue, Barangay Wack wack Mandaluyong City	PREGINET connectivity	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
HARRDEC	Benguet State University, La Trinidad, Benguet	PREGINET connectivity	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
Ilocos ARRDEC	Mariano Marcos State University, Ilocos Norte	PREGINET connectivity	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
IRRI	Los Banos, Laguna	ASTI Embedded products/ technologies such as WLMS, datalogger, ARG, AWS	Product/technology inquiries	Q3	Q3	Maria Cristina N Manuel
Leyte State University	Baybay, Leyte	PREGINET connectivity	Product/technology talks	Q3	Q3	May C. Cayaban
LGU Sibugay	Prov Capitol Hill Heights, Sibugay, Zamboanga	ASTI Embedded products/ technologies such as WLMS, datalogger, ARG, AWS	Product/technology inquiries	Q3	Q3	Maria Cristina N. Manuel
National Food Administration	Department of Agriculture North Avenue, Diliman, Quezon City	PREGINET connectivity	Product/technology inquiries	Q3	Q3	May C Cayaban
National Hydraulic Research Center	College of Engineering, UP Diliman, Q.C	ARG	Product/technology inquiries	Q3	Q3	Maria Cristina N. Manuel
Noli de Castro for TV Patrol TV Program, ABS CBN Channel 2	ABS-CBN, Mother Ignacia St., Q C	NOA project, AWS, ARG, Tsunami	Product/technology inquiries	Q3	Q3	May C. Cayaban
Office of the Provincial Agriculturist		PREGINET webhosting service	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
Participants during the PHOpenIX (Philippine Internet Exchange) event		PHOpenIX (Philippine Internet Exchange)	Product/technology talk on PHOpenIX (Philippine Internet Exchange)	Q3	Q3	May C Cayaban
PCARRD	Los Baños, Laguna	PREGINET connectivity	Product/technology inquiries/ talks	Q3	Q3	May C. Cayaban
Philippine Army	Fort Bonifacio, Taguig City	PREGINET connectivity and webhosting	Product/technology inquiries/ talks	Q3	Q3	May C Cayaban
Student of masters in technology management	UP Diliman Technology Management Center	Inquiries on ASTI Technologies	Product/technology inquiries	Q3	Q3	May C. Cayaban
UPLBFI	UP Los Banos, Laguna	ASTI Embedded products/ technologies such as WLMS, datalogger, ARG, AWS	Product/technology inquiries	Q3	Q3	Maria Cristina N. Manuel
DOST IX	Pettit Barracks, Zamboanga City	AWS	Product/technology inquiries	Q4	Q4	Maria Cristina N. Manuel
DOST VI	Magsaysay Village, La Paz, Iloilo City	WLMS	Product/technology inquiries	Q4	Q4	Maria Cristina N Manuel
Romblon State University	Odiongan, Romblon	Agromet Station	Product/technology inquiries	Q4	Q4	Maria Cristina N. Manuel
UP Baguio	Governor Center Road, Baguio City	ARG	Product/technology inquiries	Q4	Q4	Maria Cristina N. Manuel

Table 3. S&T Service Beneficiaries

Beneficiary		Technical Services rendered	Period of Engagement		Field Staff
Name of Enterprise/ Organization	Address		Start	End	
PREGINET partners (list available upon request)	various	Maintenance of network infrastructures of PREGINET partners; Continuous monitoring of links to ensure the reliability of network	Q1	Q4	May C Cayaban
DFA PDEA	Metro Manila	Videoconferencing with the Mexico Cooperation Committee on Narcotics Trafficking, Drug Abuse & Related Offenses	Q1	Q1	May C Cayaban
PAGASA	Cebu Legazpi Baguio	Deployment of BGAN to PAGASA offices	Q1	Q1	May C. Cayaban
PAGASA	Cebu Legazpi Baguio	BGAN Tutorial for DOST-PAGASA staff	Q1	Q1	May C. Cayaban
Presidential Broadcast Staff Radio Television	Malacañang, Manila	Provision of webhosting services	Q1	Q1	May C Cayaban
Senate of the Philippines	Pasay City	Use of ASTI's streaming server by for videostreaming of the Impeachment Trial	Q1	Q1	May C. Cayaban
Telof, ASTI, Comste, ICTO		Video conferencing re: best practices for disaster management by UMS (Unified Messaging System) Norway	Q1	Q1	May C. Cayaban
UPLB	UP Los Baños, Laguna	Use of ASTI streaming server by UPLB for their streaming activities; Feb 01, 2012	Q1	Q1	May C. Cayaban
DNS-registered government institutions	nationwide	Provision of DNS services such as registration, approval, modification, deletion, maintenance of domains (backup, etc.), and sending of login information	Q1	Q4	Roxanne Avinante
Energy Development Board	38/F One Corporate Centre, Julia Vargas corner Meralco Avenue, Ortigas Center Pasig City	Use of ASTI's High Performance Computing Facilities	Q1	Q4	Jelina Tetangco
Sentinel Asia	Japan	Operations of WINDS for transmission of data from Sentinel Asia in Japan for disaster management activities of its clients	Q1	Q4	Bani Benjamin Lara
UP Diliman Tokyo Institute of Japan Chulalongkorn University	Q.C. Philippines Japan Thailand	Operations of WINDS Earth Station at ASTI for collaborative research (testing of HDTVS and Midfield applications)	Q1	Q4	Bani Benjamin Lara
1. Bizalliance Corp. 2. Itemhound Corp 3. Wikonec Inc. 4. Serbizyo, International Co Ltd 5. EastAsia Technologies Corp. 6. Asian Wireless and Broadband Institute, Inc. 7. Metahelix Management Information 8. Orchestronix 9. ATX Global Solutions and Consulting, Inc. 10 Basecamp Technologies Inc. 11. Sparkscom Technologies Inc 12 GS Metrix Technology Solutions, Incorporated 13 Version 791 Inc 14 JLC Solutions Resource 15 Sustainable Transport and Infrastructure Development Consulting, Inc	Open TBI, UP Technology Park Complex, UP Campus, Diliman, Q.C.	Network connectivity	Q2	Q2	May C. Cayaban
ARMM	ARMM Regional Governor, ARMM Complex, Cotabato City	Provision of webhosting services	Q2	Q2	May C Cayaban
Bureau of Communication Services LGU Kiangan, Ifugao LGU Davao del Norte Presidential Broadcast Staff Radio Television Malacañang	various	Webhosting services	Q2	Q2	May C. Cayaban

Beneficiary		Technical Services rendered	Period of Engagement		Field Staff
Name of Enterprise/ Organization	Address		Start	End	
ECOSOC and the Chairs of the Functional Commissions with USEC Fortunato T. Dela Peña		Videoconferencing Joint Bureau Meeting between ECOSOC and the Chairs of the Functional Commissions with USEC FTP	Q2	Q2	May C. Cayab
PAGASA	Tagaytay City, Cavite	BGAN Tutorial	Q2	Q2	May C. Cayab
PAGASA Hinatuan Station	Surigao del Sur	BGAN deployment	Q2	Q2	May C. Cayab
Phivolcs	C.P. Garcia Ave , Diliman, Q.C.	Maintenance/Upgrading of deployed tsunam device in Corregidor Island	Q2	Q2	Joseph Bolo
PNRI	Commonwealth Ave , Q.C	Server collocation	Q2	Q2	May C. Cayab
Presidentia Anti Organized Crime Commission	Camp Crame, Q.C.	Provision of webhosting services	Q2	Q2	May C Cayab
UP Baguio UP Tacloban UP Pampanga UP Mindanao Mintal Nat'l Housing Authority Q.C UPV Miagao, Iloilo UPOU Los Baños, Laguna Veterans Memorial Medica Center NCC Q.C. UP Cebu	various	PREGINET connectivity services	Q2	Q2	May C. Cayab
UPLB		Use of streaming facilities	Q2	Q2	May C Cayab
UPLB	Los Banos, Laguna	Videostreaming of eUP Launch at UPLB	Q2	Q2	May C Cayab
Bureau of Communication Services	Office of the President, PCS Bldg. 310 San Rafael St , Malacañang Palace Complex, San Miguel, Manila	Provision of webhosting services	Q3	Q3	May C. Cayab
Central Board of Assessment Appeal	7th floor, EDPC Bldg , Bangko Sentral ng Pilipinas Complex Roxas Boulevard, Manila	Provision of webhosting services	Q3	Q3	May C Cayab
Court of Appeals	Manila	Provision of server collocation	Q3	Q3	May C Cayab
DOST	Bicutan, Taguig	Provided technical support for HITS conference	Q3	Q3	May C. Cayab
DOST	DOST Compound, Bicutan, Taguig City	Network set up for DOST-SIDC (Science for International Development Conference) event	Q3	Q3	May C Cayab
DOST NSTW Organizers		Provided Wireless Connection, Video Streaming and Technical Support during NSTW at SMX	Q3	Q3	May C. Cayab
LGU Davao del Norte	Davao del Norte	Provision of webhosting services	Q3	Q3	May C Cayab
LGU Kiangan	Kiangan, Ifugao	Provision of webhosting services	Q3	Q3	May C Cayab
Open TBI tenants	UP Technology Park Complex, C.P. Garcia Ave , UP Campus, Diliman, Q.C	Configure network port (untagged from switch)	Q3	Q3	May C. Cayab
PCAARRD	Los Baños, Laguna	Installat on of Wireless radio	Q3	Q3	May C. Cayab
Philippine Children Medical Center	Agham Rd , Quezon Ave , Q.C.	Installat on of wireless radio for Philippine Children Medical Center	Q3	Q3	May C. Cayab
PHIVOLCS	C.P. Garcia Ave , Diliman, Q.C	Modem troubleshooting	Q3	Q3	May C. Cayaba
Public Private Partnership Center of the Philippines	NEDA, Q.C.	Provision of webhosting services	Q3	Q3	May C Cayab
UP Manila National TeleHealth Center	UP Manila	Provision of server collocation	Q3	Q3	May C. Cayab
VMMC	North Ave , Q.C.	Fixed link/testing of video conference between VMMC and PCMC	Q3	Q3	May C Cayab

Beneficiary		Technical Services rendered	Period of Engagement		Field Staff
Name of Enterprise/ Organization	Address		Start	End	
KDDI/APAN	Japan	Provide assistance to KDDI/APAN in the deployment of new Media Converter for the JP-APAN and ASTI-PH Link	Q4	Q4	May C. Cayaban
PCARRD	Los Banos, Laguna	Fixing of PCARRD wireless link to UPOU	Q4	Q4	May C. Cayaban
UPLB	Los Baños, Laguna	Provide streaming facilities for UPLB Loyalty Day Parade 2012	Q4	Q4	May C Cayaban
UPOU	Los Baños, Laguna	Fixing and testing of network link	Q4	Q4	May C. Cayaban
Energy Development Board	38/F One Corporate Centre, Julia Vargas corner Meralco Avenue, Ortigas Center Pasig City	Use of ASTI's High Performance Computing Facilities	Q1	Q4	Jelina Tetangco

Table 4. R&D Projects Implemented

Title of R&D Project	Socio-Economic Objective	Project Duration		Project Leader		Total Project Expenditures	Funding Source	Status	Project Budget
		Start	End	Name	Email				
Development of a Low Cost and Locally Designed Meteorological Buoy (METBOUY)	Access to information	Sept 2011	Aug 2013	Gerwin P. Guba	gerwin@asti.dost.gov.ph	2,740,790.30	DOST GIA (total budget distributed to ASTI, MIRDC, PCIEERD)	Ongoing	7,260,000.00
Development of a Field Monitoring (FMON) System	Access to information	Jan 2009	Dec 2012	Denis F. Villorente	denis@asti.dost.gov.ph	1,386,302.41	DOST-GIA	Completed	11,579,582.19
Development of Hybrid Weather Monitoring System and Production of Weather and Rain Automated Stations (AWS)	Others (Microelectronics), Access to information	Sept 2010	Aug 2013	Gerwin P Guba	gerwin@asti.dost.gov.ph	6,951,155.83	DOST-GIA	Ongoing	71,580,381.00
Emergency Distribution of Hydro Meteorological Devices in Hard Hit Areas in the Philippines (HYDROMET)	Access to information	Dec 2011	Dec 2013	Denis F. Villorente	denis@asti.dost.gov.ph	44,005,369.55	PCIEERD	Ongoing	150,000,000.00
Establishment of a Cost-effective Local Tsunami Warning System for Selected High-Risk Coastal Communities of the Philippines	Access to information	Jul 2011	Mar 2013	Gerwin P. Guba	gerwin@asti.dost.gov.ph	5,143,980.87	DOST-GIA (budget distributed to PHIVOLCS/ ASTI)	Ongoing	7,693,612.00
Infrastructure and Connectivity Component - DOST INFRA: Upgrading of DOST ICT Infrastructure and Interconnectivity Network	Access to information	Jan 2008	Nov 2012	Bayani Benjamin R. Lara	bani@asti.dost.gov.ph	7,109,784.72	DOST-GIA	Completed	61,112,765.70

Title of R&D Project	Socio-Economic Objective	Project Duration		Project Leader		Total Project Expenditures	Funding Source	Status	Project Budget
		Start	End	Name	Email				
Multicast Experiment using the WINDS (Wideband InterNetworking Engineering Test and Demonstration Satellite (WINDS)	Access to information	Oct 2008	continuous	Denis F. Villorente	denis@asti.dost gov.ph	-	ASTI	Ongoing (operations only)	
Philippine Geoportal: One Nation One Map Project	Access to information	Aug 2011	Aug 2014	Rene C. Mendoza	rene@asti.dost gov ph	21,740,006 67	NAMRIA	Ongoing	34,045,000 00
Capacity-Building in Support for the Pilot Testing of the DOST Tablet Computers (PC Tablet 2)	Access to information	Jul 2011	Jun 2013	Peter Antonio B. Banzon	peter@asti.dost.gov ph	9,707,856 12	DOST-GIA	Ongoing	14,793,000 00
Development of the Civil Service Commission Computerized Examination (CSC-COMEX)	Access to information	Jul 2011	Jun 2013	Joanna G. Syjuco	joan@asti.dost.gov.ph	5,332,314.54	CSC	Ongoing	6,303,184 00
Customization and Adoption of ASTI-Infosys for the Technology Resource Center	Access to information	Jul 2011	Feb 2012	Rene C. Mendoza	rene@asti.dost.gov ph	-	TRC (budget for licensing fee and honoraria of staff)	Completed	
Customization of ASTI Infosys for the National Security Council	Access to information	Jun 2011	Jun 2013	Rene C. Mendoza	rene@asti.dost.gov.ph	628,913.38	NSC	Ongoing	1,882,977 00
Development of Overseas Filipinos Information System (OFIS)	Access to information	Jul 2011	Dec 2012	Rene C. Mendoza	rene@asti.dost.gov ph	1,174,798.59	Office of the President	Ongoing	1,422,230 00
Development of the National Payroll (NPS) and the Government Human Resource Information System (GHRIS)	Access to information	July 2012	Jun 2013	Rene C. Mendoza	rene@asti.dost.gov.ph	270,122.57	DBM	New	Budget: ₱ 6,065,956 (ASTI P2,521,592; NSC P3,544,364)
Development and Integration of the Government Manpower Information System (GMIS) and the Government Human Resource Information System (GHRIS)	Access to information	Aug 2012	Jul 2013	Rene C. Mendoza	rene@asti.dost gov.ph	285,031.47	DBM	New	9,950,000 00
SEALING (Support to policy dialogues and strengthening of coooperation with Southeast Asia)	Access to information	Jan 2010	Feb 2012	Denis F. Villorente	denis@asti.dost.gov.ph	401,226 42	European Commission	Completed	

Title of R&D Project	Socio-Economic Objective	Project Duration		Project Leader		Total Project Expenditures	Funding Source	Status	Project Budget
		Start	End	Name	Email				
Nationwide Disaster Risk Exposure, Assessment and Mitigation (DREAM) Program: Project 1 LIDAR and INSAR Data Acquisition (with UPD and PAGASA)	Access to information	Dec 2011	Dec 2013	ASTI Project Team Leader: Rene C. Mendoza; Prógram Leader from UP Diliman – Training Center for Applied Geodesy and Photogrammetry (UPD-TCAGP)	denis@asti.dost gov ph	303.975,000.00	DOST-GIA	Ongoing	841,486,296 00
Nationwide Disaster Risk Exposure, Assessment and Mitigation (DREAM) Program Project 3 – Extracting Digital Elevation Models and Salient Features for Flood Modelling	Access to information	Dec 2011	Dec 2013	ASTI Project Team Leader: Rene C Mendoza; Program Leader from UP Diliman – Training Cen ter for Applied Geodesy and Photogrammetry (UPD-TCAGP)	denis@asti.dost gov.ph	-	DOST-GIA	Ongoing	247,991,302.00
Pilot Study of Interactive Science and Mathematics Courseware for Secondary Level Schools (2nd Year Modules: Biology and Algebra)	Access to information	Mar 2012	Mar 2012	Joanna G. Syjuco	joan@asti.dost.gov.ph	-	DOST-SEI	New/ Completed	-
Development of Pilot Study Report and Revisions of Interactive Science and Mathematics Courseware for Secondary Level Schools (2nd Year Modules: Biology and Algebra 2	Access to information	Apr 2012	Jun 2012	Joanna G. Syjuco	joan@asti.dost.gov.ph	-	DOST-SEI	New/ Completed	-
Development of Interactive Science and Mathematics Courseware for Secondary Level Schools	Access to information	Oct 2008		Joanna G. Syjuco	joan@asti.dost.gov.ph	1,133,034.79	DOST-GIA (budget for Jan 2011-Dec 2011)	Deferred (March 2012)	11,368,452.00
Adoption and Customization of ASTI Information System for Office of the Solicitor General	Access to information	Feb 2012	July 2012	Rene C. Mendoza	rene@asti.dost.gov.ph	-	Office of the Solicitor General	New/ Completed	142,800.00
Adoption and Customization of ASTI Infosys for the Dept. of Energy	Access to information	Mar 2012	Mar 2013	Rene C. Mendoza	rene@asti.dost.gov.ph	761,744.08	Dept of Energy	New	2,016,824.00

Title of R&D Project	Socio-Economic Objective	Project Duration		Project Leader		Total Project Expenditures	Funding Source	Status	Project Budget
		Start	End	Name	Email				
Establishment of Agro Meteorological Stations in Highly Vulnerable Agricultural Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System" (AGROMET cum CLIMATE CHANGE)	Access to information	Apr 2012	Mar 2015	Gerwin P. Guba	gerwin@asti dost gov ph	22,290,462.38	Bureau of Soils and Water Management	New	80,887,340.00
Integrated Government Philippines (iGov Phils.)	Access to information	Apr 2012	Dec 2013	Denis F Villorente	denis@asti. dost gov ph	234,932,604.24	NCC (e gov funds)	New	478,475,910.00
Integration of Commercial Biomedical Device Units with CHITS and e-Triage (RxBox)	Access to information	Oct 2012	Sept 2013	Peter Antonio B. Banzon	peter@asti. dost.gov ph	-	PCHRD GIA	New	4,337,640.00
Establishment and Operation of Philippine Electronics Product Development Hub	Others (Microelectronics)	Dec 2012	Dec 2015 (3-yr duration)	Peter Anton o B. Banzon	peter@asti. dost.gov.ph	-	PCIEERD	New	229,255,000.00

Table 5. Personnel Profile (Regular)

Category	Number	% Distribution
Total Number of Personnel (Headcount)	64	
By Job Function		
Administration and Management	21	33%
Technical	43	67%
By Position Status		
Regular	64	100%
By Sex		
Male	30	47%
Female	34	53%
By Age Group		
20 years old and below	0	0%
21 30	23	36%
31 40	24	38%
41-50	13	20%
51-60	4	6%

Category	Number	% Distribution
60 years old and over	0	0%
By **Educational Attainment**		
With PhD	0	0%
Master's Degree	21	33%
Bachelor's Degree	36	56%
Others	7	11%

Table 6. Intellectual Properties Filed / Granted

Title/Description of Intellectual Property	Application/ Registry No.	Type of IP	Name of Researcher/Author	Status	Date Filed/ Granted	Applicant/ IP Owner
Advanced Remote Data-Acquisition Unit	Appln. No. : 2 2012-000525	Utility Model	Gerwin P. Guba, Harold Bryan S. Paler	Filed	Sept 21, 2012	ASTI
Advanced Remote Data Acquisition Unit (arQ)	Appln No. : 04 2012-009627	Trademark	Gerwin P Guba	Filed	Aug 3, 2012	ASTI
Automated Rain Gauge Station	Reg. no A2012-2182	Copyright for manual (class A)	Gerwin P Guba, katherine R Babaran, Niel Xavier C. Elpa	Registered	Nov 27, 2012	ASTI
Automated Weather Station	Reg. no.: A2012-2183	Copyright for manual (class A)	Gerwin P. Guba, katherine R. Babaran, Niel Xavier C Elpa	Registered	Nov 27, 2012	ASTI
Grade I Mathematics Courseware for Tablet PC	Reg no : N2012-89	Copyright for computer program (class N)	Mark Anthony I. Bersola, Ivan Dave J. Cabigon, et. al.	Registered	Nov 27, 2012	ASTI/SEI
Grade I Mathematics Courseware for Tablet PC	Reg. no : P2012-344	Copyright for sound recording (class N)	Ivan Dave J. Cabigon; Dianne A. David; Gerard Emerson I Gaddi	Registered	Nov 27, 2012	ASTI/SEI
Development of Computer-Aided Instructions for Science and Mathematics	F2011-02	Copyright (class F – musical composition)	Ricardo S. Galinato, Jr.	Registered	Jan 19, 2011	ASTI/SEI
Development of Computer Aided Instructions for Science and Mathematics	G2011-05	Copyright (class G – drawing)	Jocel A. Atienza, Rusnell A. Espinoza, Ricardo S. Galinato Jr , Markel A. Madrigal, Harris Rainier V. Osania, Areen S. Relucio, Francisco Educardo Y Syantos, Joanna Gonzales-Syjuco and Joseph Syjuco	Registered	Jan 19, 2011	ASTI/SEI
Development of Computer Aided Instructions for Science and Mathematics	N2011-04	Copyright (class N – computer program)	Jocel A. Atienza, Rusnell A Espinoza, Ricardo S. Galinato Jr , Markel A. Madrigal, Harris Rainier V. Osania, Areen S. Relucio, Francisco Educardo Y Syantos, Joanna Gonzales-Syjuco and Joseph Syjuco	Registered	Jan 19, 2011	ASTI/SEI
Solar Powered, GSM-Based Tsunami Audio-Visual Alarm System	2-2010 000442	Utility Model	Alvin E. Retamar, Gerwin P Guba, Glenn Vincent C. Lopez, Harold Bryan S. Paler, Neil Xavier C. Elpa, Jeanette D Badong	Filed	Sep 2, 2010	ASTI
Digital Wood Moisture Meter	2-2009 000048	Utility Model	Marina A Alipon, Gil B. Dolotina, Gerwin P. Guba, Grecelda A. Eusebio, & Alvin E. Retamar, Alexander E Sy	Granted	Aug 17, 2009	ASTI/FPRDI
FPRDI FA507 Wood Moisture Meter	4-2009-001908	Trademark	Marina A. Alipon, Gil B. Dolotina, Gerwin P. Guba, Grecelda A Eusebio, & Alvin E. Retamar	Registered	Jul 9, 2009	ASTI/FPRDI
User Guide Digital Wood Moisture Meter: FA507	0 2008-31	Copyright (class O – other literary, etc.)	Marina A. Alipon, Gil B. Dolotina, Gerwin P. Guba, Grecelda A Eusebio, & Alvin E. Retamar	Registered	Oct 9, 2008	ASTI/FPRDI

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Self Paced Learning Modules for Digital and Analog Integrated Circuit Design Courses (Unit 1-4, and Laboratory Manual)	A 2006-3242	Copyright (class A – books and other writings)	Mary Grace C. Dy Jongco, Jeffreyk S. Mendiola, Aaron S Cabuling, Benson T. Siongco	Registered	Nov 15, 2006	ASTI
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Table 7. Scientific Papers Prepared / Published / Presented

Title of Scientific Paper	Author/s	Date Prepared/ Published/ Presented
Data Warehousing of Microbial Information Databases for In Silico Mining of a Bioactive Ligand	Edwin P Alcantara (UPLB-BIOTECH), Emmanuel D Aldea, Marylyn V Rey, Jelina Tanya H. Tetangco, Mary Grace C. Dy Jongco (ASTI)	Paper presented by Dr. Edwin P. Alcantara of UPLB during the International Conference on Green Technology and Sustainable Development, Hochiminh City, Vietnam, Sept 29-30, 2012
Near-Real Time Flood Extent Monitoring in Marikina River Philippines. Model Parameterisation Using Remotely-Sensed Data and Field Measurements	Jojene R. Santillan, Enrico C. Paringit, Roseanne V. Ramos (Research Laboratory for Applied Geodesy and Space Technology, Training Center for Applied Geodesy and Photogrammetry & Department of Geodetic Engineering, UP Diliman); John Robert T. Mendoza, Nena Carina Española (DOST-ASTI); Jen Alconis (National Institute of Geological Sciences, UP Diliman)	In Proceedings of the 33rd Asian Conference on Remote Sensing, ACRS 2012 – Aiming Smart Space Sensing, November 26-30, 2012, Ambassador City Jomtien Hotel Pattaya, Thailand

Table 8. Technical Training Courses Conducted

Title of Training	Training Location			No. of Participants	Inclusive Dates Conducted	
	Venue	Municipality/ City	Province		Start	End
Advanced Training on File Sharing	NAMRIA	Fort Bonifacio, Taguig City	Metro Manila	20	Jan 16	Jan 18
Joomla! CMS for Beginners Training	SEAMEO INNOTECH	Commonwealth Ave , Diliman, Quezon City	Metro Manila	11	Jan 18	Jan 20
Joomla! CMS Training	DOST RO VI	Magsaysay Village , La Paz, Iloilo City	Iloilo	17	Mar 19	Mar 23

Title of Training	Training Location			No. of Participants	Inclusive Dates Conducted	
	Venue	Municipality/ City	Province		Start	End
Training of ICTO technical staff on the use of ASTI streaming equipment for the ASEAN ICT Masterplan (AIM) 2015 Forum	ASTI	Diliman, Quezon City	Metro Manila	3	Feb	Feb
IPv6 Unleashed 2012: The 2nd Philippine IPv6 Conference (with technical track)	Harold's Hotel	Cebu City	Cebu	61	Apr 23	Apr 23
IPv6 Unleashed 2012: IPv6 with Internet Resource Management Training Workshop	UP Cebu College	Lahug, Cebu City	Cebu	40	Apr 24	Apr 27
Broadband Global Area Network Refresher Training for Batch 1	ASTI	Diliman, Quezon City	Metro Manila	29	May 17	May 17
Broadband Global Area Network Refresher Training for Batch 2	ASTI	Diliman, Quezon City	Metro Manila	35	Jan 16	Jan 16
EMC training	ASTI	Diliman, Quezon City	Metro Manila	27	May 11	May 11
PHP/MySQL for Beginners	ASTI	Diliman, Quezon City	Metro Manila	19	Jun 20	Jun 22
PHP/MySQL for Developers using Yii Framework Training	ASTI	Diliman, Quezon City	Metro Manila	16	Jun 25	Jun 29
BGAN Refresher Training - Visayas Cluster	PAGASA Mactan Station	Cebu City	Metro Manila	30	Jun 05	Jun 05
BGAN Refresher Training - Mindanao Cluster	Hotel Conchita	Gullermo-Yacapin St., Cagayan De Oro City	Cagayan de Oro	22	Jun 15	Jun 15
Technical training on Voice Over IP/Asterisk IP PBX Administration	ASTI	Diliman, Quezon City	Metro Manila	11	Sept 25	Sept 28
User Training of EAR (Examinee Account Registration) 1.1 and ESR (Examination Slot Reservation) 1.0 for Admin	ASTI	Diliman, Quezon City	Metro Manila	19	Sept 11, 13, 17	Sept 11, 13, 17
Linux shell scripting and Ubuntu Administration	ASTI	Diliman, Quezon City	Metro Manila	22	Oct 01	Oct 05
High Performance Computing	ASTI	Diliman, Quezon City	Metro Manila	16	Oct 29	Oct 29
Joomla training	ASTI	Diliman, Quezon City	Metro Manila	13	Nov 19	Nov 23
PROJECT NOAH Information Education Communication Campaign		Cagayan de Oro City	Cagayan de Oro	103	Nov 27	Nov 27
5th User Acceptance Training of CSC-COMEX	ASTI	Diliman, Quezon City	Metro Manila	9	Dec 03	Dec 05
Training on the Installation of BSWM-Agromet Station	Cavite State University	Naic	Cavite	8	Dec 06	Dec 07

Table 9. International Scientific Linkages and Networks

Name of Institution	Location/ Country	Nature /Description of Scientific Linkages
Ministry of Agriculture, Fisheries and Forestry Information Network (MAFFIN)	Japan	MAFFIN provides funding support for the establishment and maintenance of the Philippines' link to the Asia-Pacific Advanced Network (APAN)
Keio University	Japan	SOI Asia (School of Internet-Asia); Asian Internet Interconnection Initiatives (AI3); Trainings, information exchange
DANTE (Delivery of Advanced Network Technology to Europe)	United Kingdom	Trans-Eurasia Information Network 3 (TEIN3). Research and education connectivity to Europe and within the Southeast Asia region, Trainings and other capability building initiatives, information exchange
Asia Pacific Network Information Centre (APNIC)	Australia	Internet operation and management, regional networking activities; training; information exchange
Commission of the European Communities Information Society and Media Directorate-General (with Sigma Consultants (Orionis Division) in France, as Coordinator)	Belgium; France	Collaborative Project entitled Support to policy dialogues and strengthening of coooperation with Southeast Asia (SEALING Project)
Japan Aerospace Exploration Agency (JAXA)	Japan	Multicast Experiment Using the Wideband InterNetworking Engineering Test and Demonstration Satellite (WINDS)
Pacific Rim and Grid Middleware Assembly (PRAGMA)	USA	S&T Information Exchange through Grid Forum, ASTI as a member institution
Enabling Grid for E-ScienE (EGEE)	Italy (coordinating country)	Computing resource sharing, and S&T research collaboration
Networked Computing Systems Lab Gwangju Institute of Science & Technology (NetCS GIST), Republic of Korea	Republic of Korea	Deployment of SmartX Rack, and provision of network connectivity, and user community support (Oct. 2012 – Dec 2015)
ASEAN Committee on S&T (COST)	Philippine counterpart (DOST)	S&T Information Exchange through the conduct of/attendance to conferences, S&T exhibition and collaborative activities between member-countries
APAN (Asia & Pacific Advanced Network), Ltd.	Singapore (APAN secretariat c/o SingAREN)	Participation and promotion of activities relating to the development and deployment of next generation networking/Internet techology applications and services in research and education, and encouraging the interconnection of advanced networks
National Center for High Performance Computing (NCHC)	Taiwan	S&T Information Exchange through attendance to trainings
Academia Sinica Grid Computing Centre (ASGC)	Taiwan	S&T Information Exchange re: high performance computing through the conduct of/attendance to conferences, S&T exhibition, and collaborative activities between member countries

Table 10. External Resources Generated

Donor/Name of Institution	Title/Description of Assistance	Value of Assistance (in Pesos)
DOST GIA (total budget distributed to ASTI, MIRDC, PCIEERD)	Development of a Low-Cost and Locally-Designed Meteorological Buoy (METBOUY)	3,892,053.00
DOST GIA	Development of Hybrid Weather Monitoring System and Production of Weather and Rain Automated Stations (AWS)	19,161,819.00
PCIEERD	Emergency Distribution of Hydro-Meteorological Devices in Hard-Hit Areas in the Philippines (HYDROMET)	150,000,000.00
NAMRIA	Philippine Geoportal: One Nation One Map Project	9,576,000.00
DOST GIA	Capacity-Building in Support for the Pilot Testing of the DOST Tablet Computers (PC Tablet 2)	7,218,696.00
CSC	Development of the Civil Service Commission Computerized Examination (CSC-COMEX)	6,716,816.00
DBM	Development of the National Payroll (NPS) and the Government Human Resource Information System (GHRIS)	2,521,592.00
DBM	Development and Integration of the Government Manpower Information System (GMIS) and the Government Human Resource Information System (GHRIS)	9,950,000.00
European Commission	SEALING (Support to policy dialogues and strengthening of cooperation with Southeast Asia)	266,527.62

Donor/Name of Institution	Title/Description of Assistance	Value of Assistance (in Pesos)
DOST SEI	Development of Pilot Study Report and Revisions of Interactive Science and Mathematics Courseware for Secondary Level Schools (2nd Year Modules. Biology and Algebra 2	157,700 00
Dept. of Energy	Adoption and Customization of ASTI Infosys for the Dept of Energy	2,016,824.00
Bureau of Soils and Water Management	Establishment of Agro-Meteorological Stations in Highly Vulnerable Agricultural Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System" (AGROMET cum CLIMATE CHANGE)	60,459,920.00
NCC (e gov funds)	Integrated Government Philippines (iGov Phi s)	231,764,000.00
PCHRD GIA	Integration of Commercial Biomedical Device Units with CHITS and e Triage (RxBox)	3,466,320 00
DOST RO IX	DOST RO IX- Fabrication of AWS Project	520,000 00
DOST RO VI	DOST RO VI - Fabricationof WLS Project	345,000.00
TAPI	TAPI - NSTW 2012	80,000.00
DOST-GIA	DOST NSTW 2012	311,509 00
UPLB	UP Los Banos Dev't of Decision Support Systems & Tools for Managing Rainfed Agricultural Lands in Mt Makiling	260,000.00
DA	DA RFU III - Fabrication of AWS Project	470,000 00
UP National Hydraulic Research Center	UP Nat'l Hydraulic Research Center Fabrication of ARG Project	60,000.00
DOST IX	DOST IX-AWS & ARG Fabrication Project (PLGU-Zamboanga Sibugay)	620,000 00
DA	DA RFU XI- Fabrication of AWS	470,000 00
DA	DA RFU IV - Fabrication of AWS	470,000 00
DA	DA RFU V Fabrication of AWS	470,000.00
DA	DA Agricultural Pilot Center- Fabrication of AWS Project	470,000 00
UPLB	UP - Los Banos- Nat'l Research Dev't Proj. for Watershed Mgnt. Bombangan Lev n Sub Watershed Laguna	380,000.00
EDC	EDC- Consultation on Parrallelization of iTough2 Program (Honoraria, June 5 - December 31, 2011)	144,000.08
EDC	EDC Consultation on Parrallelization of iTough2 Program (Honoraria, Fevruary 15- August 15, 2011)	144,000.00

Glossary

AFP	Armed Forces of the Philippines
AGROMET	Agro-Meteorological Stations in Highly Vulnerable Agricultural Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System Project
AI3	Asian Internet Interconnection Initiaives
AIT	Asian Institute Technology
APAN	Asia -Pacific Advanced Network
APNIC	Asia Pacific Network Information Centre
APRICOT	Asia Pacific Regional Internet Conference on Operational Technologies
ARG	Automated Rain Gauge
ASA	Advice of Sub-Allotment
AWS	Automated Weather Station
BCH	Development of the National Biosafety Clearing-House Information System Projecct
BGP	Border Gateway Protocol
BID	Bureau of Immigration and Deportation
BSWM-Agromet	Establishment of Agrometeorological Stations in Highly Vulnerable Areas: A Tool for Climate Change Adaptation and in the Development of Local Early Warning System Project
BTr	Bureau of Treasury
CHITS	Community Health Information Tracking System
COA	Commission on Audit
CONNECT	COllaboration for Network eNabled Education Culture, Technology and science Asia
CoP	Communities of Practice
CSC-COMEX	Development of Civil Service Commission - Computerized Examination System Project
CSD	Computer Software Division
CVISNET	Central Visayas Information Sharing Network
DA	Department of Agricu
DBM	Department of Budget and Management
DENR XI	Department of Environment and Natural Resources Regional Office Lanang Davao
DepEd	Department of Education
DFA	Department of Foreign Affairs
DOE	Department of Energy
DOST	Department of Science and Technology
DOST-PEZA	Department of Science and Technology-Philippine Economic Zone Authority
DREAM	Nationwide Disaster Risk Exposure, Assessment and Mitigation
DSM	Digital Surface Model
DTI-PTTC	Department of Trade and Industry-Philippine Trade Training Center
DTM	Digital Terrain Model
EAR	Examination Application Registration
EC	European Commission
ECG	Electrocardiogarm
eDOST-INFRA	Upgrading of DOST ICT Infrastructure and Interconnectivity Network
EEEI	Electrical and Electronics Engineering Institute
EMC	Electromagnetic Compatibility
EMR	Electronic Medical Record
eNai	Electronic Natal Assistive Intervention
EPDC	Philippine Electronics Product Development Center
ESC	Examination Slot Confirmation
ESG	Embedded Systems Group
ESR	Examination Slot Reservation
EU-ASEAN	European-Association of Southeast Asian Nation
FAD	Finance and Administrative Division
FP7	Seventh Framework Programme
GACPA	Government Association of Certified Public Accountants
GASS	General and Administrative Support Services
GHRIS	Government Human Resource Information System
GIDA	Geographically Isolated and Disadvantaged Area
GIFMIS	Government Integrated Financial Management Information System
GSM/GPRS	Global Systems for Mobile Communication/Gene Packet Radio Service
HPC	High Performance Computing
HPRC	Boosting Grid Computing Using Reconfigurable Hardware Technology
HR	Human Resource
HYDROMET	Emergency Distribution of Hydro-Meteorological Devices in Hard-Hit Areas in the Philippines
ICT	Information and Communications Technology
ICTO	Information and Communications Technology Office
IEC	information and education campaign
iGovPhil	Integrated Government Philippines
INFOSYS	Information System
InSAR	Interferometric Synthetic Aperture Radar
IP	Internet Protocol
IP/MPLS	Internet Protocol/Multiprotocol Label Switching
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
ISIS	Intermediate System-to-Intermediate System (routing protocol)
ISO	International Organization for Standardization
ISP	Internet Service Provider
ITCU	International Technology Cooperation Unit
JAXA	Japan Aerospace Exploration Agency
JAXA	Japan Aerospace Exploration Agency (JAXA)
K-AGRINET	Knowledge Networking Towards Enterprising Agricultural Communities
KM	Knowledge Management
KMD	Knowledge Management Division
KRAs	Key Result Areas
LAN	Local Area Network
LGU	Local Government Unit
LiDAR	Light Detection and Ranging
MAFFIN	Ministry of Agriculture, Forestry and Fisheries Information Network

MIS	Management Information Systems Geographically Isolated and Disadvantaged Areas (GIDA)
MMSU	Mariano Marcos State University
MPBF	Minimum Blocking Probability First (routing protocol)
NAMRIA	National Mapping and Resource Information Authority
NAV6	National Advanced IPv6 Centre of Excellence
NC	Non-conformity
NCC	National Computer Center
NCP	National Contact Point
NHRC	National Hydraulic Resource Center
NOAH	Nationwide Operational Assessment of Hazards Project
NPS	National Payroll System
NTHC	National Telehealth Center
OD	Office of the Director
OFIS	Overseas Filipinos Information System
OFs	Overseas Filipinos
OPEN TBI	Department of Science and Technology- Philippine Economic Zone Authority Open Technology Business Incubator Project
OSPF	Open Shortest Path First (router protocol)
OWWA	Overseas Workers Welfare Administration
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PCARRD	Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development
PCB	Printed Circuit Board
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PICC	Philippine International Convention Center
POEA	Philippine Overseas Employment Administration
PREGINET	Philippine Research, Education and Government Network
PS	Personnel Services
PSTCs	Provincial Science and Technology Centers
QMR	Quality Management Representative
QMS	Quality Management System
R&D	Research and Development
RDD	Research and Development Division
RHU	Rural Health Units
RxBox	Integration of Commercial Biomedical Device Units with CHITS and e-Triage Project
SAD	System Analysis and Design
SEI	Science Education Institute
SGISM	Shared Government Information System for Migration
SMEs	Small and Medium Enterprises
SOI	School-on-the-Internet
SRS	Software Requirements Specification
SSED	Services Engineering Division
TACIS	Tests, Analyses and Calibration Information System
TBI	Technology Business Incubator
TEIN 3	Trans-Eurasia Information Network 3
TESDA	Technical Education and Skills Development Authority
TWG	Technical Working Group
UAT	User Acceptance Testing
UNESCO	United Nations Education, Sports, and Cultural Organization
UP	University of the Philippines
UP NISMED	UP National Institute for Science and Mathematics Education Development
UP-TCAGP	UP Training Center for Applied Geodesy and Photogrammetry
VMMC	Veterans Memorial Medical Center
WINDS	Multicast Experiment using the Wideband InterNetworking Engineering and Demonstration Satellite
WLMS	Water Level Monitoring Stations

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